CIRCULAR.

HATEFUL LOCUST or "GRASSHOPPER."

1. Did the locust appear at all in your locality or in your county the past summer or fall?

2. If so, give the exact date at which they first appeared, and, as near as may be, the direction from which they came and the direction and force of the wind at the time.

3. State, as near as may be, the prevailing direction in which they flew or traveled, and whether the direction was much altered or influenced by the winds. Also, whether different swarms came at different times from different directions.

4. How long did they stay?

5. What plants or crops were most injured by them?

6. What plants or crops more particularly escaped their ravages?

7. Did the locusts lay eggs; and, if so, what positions did they prefer, as sward, stubble, roadways, ploughed, high or low ground, etc.?

8. Were any of the eggs noticed to hatch during the protracted and mild fall weather?

9. What are your recollections of former visitations, with reference to these questions? And what has been the damage resulting the succeeding year of such visitations, from the young hatched on the ground?

10. Give an estimate of the amount of damage caused by them in your county.

11. What means have been adopted to prevent their injuries or to destroy them?

12. *State more particularly, if locusts invaded your county, the precise eastern limit which they reached.*

CHINCH BUGS.

1. How far back in the history of your county has this insect been known to injure the grain and grass crops?

2. What crops have suffered most from its ravages?

3. Have any systematic efforts ever been made to overcome its injuries? and have you any idea to what extent my Second Report—which contained all that was known about the insect up to that time, and which was bound in with the Fifth (1869) State Agricultural Report—is distributed or known of among the farmers of your county?

4. Give approximately this year's estimated damage in your county, by this single insect—all crops affected by it considered.

OFFICE OF THE

STATE ENTOMOLOGIST,

Room 42, Mutual Insurance Building,

N. W. Corner Sixth and Locust Streets,

St. Louis, *187*

Dear Sir:

I take the liberty of enclosing with my Sixth Report, and with the circular from Gen. Marmaduke, Secretary of the State Board of Agriculture, a few questions for your consideration. Two insects, namely, the Hateful Locust or so-called "Grasshopper," and the Chinch-bug, have attracted unusual attention during the year, on account of the wide-spread devastation they have caused. It is my intention to treat fully of them in my forthcoming report, and it is with the object of obtaining accurate data from your county and locality, which you are better capable of giving than myself, that I address you this note and these questions. If you can find time to answer the questions in the circular, you can enclose it in the same envelope with your answer to Gen. Marmaduke's, or send it to me direct. Do not hesitate to add as fully as you desire any remarks not suggested or called forth by the questions. Such remarks are often of great practical importance. I have given attention to all these questions myself, so far as I have been able to, but

your co-operation in procuring accurate data in localities which I have not been able to visit, and in enabling me to complete the record of the invasion of 1874, will be duly appreciated and accredited. It is only by correct record of the past that we can judge of the future. As you are perhaps aware, I firmly believe that locusts can never reach, or do any serious damage, beyond a line drawn at a rough estimate along longitude 17° west from Washington; and it is very important that the people of the State east of that line should be able to rest their faith in my opinion. While I desire answers to the questions in the circular more particularly, I shall be pleased to receive notes of any other insects which attracted unusual attention in your locality during the year.

I am,

My Dear Sir,

Yours very respectfully,

C. V. RILEY.

P. S.—If you cannot yourself give attention to the questions in the circular, will you do me the favor to hand it to some friend who interests himself in these matters?

OBSERVER OF NATURE.

VOL. 2. LAWRENCE, KANSAS, FRIDAY, JUNE 4, 1875. No. 4.

The Natural History Society

OF THE

Kansas State University

MEETS ONCE A FORTNIGHT, AT THE NEW University Building,

On Thursday Afternoon, at 2 1-2 o'clock.

The exercises consist of papers, a general discussion, and the Observer of Nature.

"QUI VIDET, SCIT."

THE OFFICERS OF THE SOCIETY ARE:

President .....ANDREW ATCHISON.
Vice President..... Miss ANNIE E.MOZLEY.
Recording Secretary.Miss MOLLIE E. HERRINGTON.
Corresp. Secretary...Prof. F. H. SNOW.
Curator.....GEO. F. GAUMER.
Editor .....WILLIAM OSBURN.
Critic .....W. S. HERRICK.
Treasurer..... .Miss ANNA HANCOCK.
Marshal.....THOMAS GAUMER.

Society Items.

The society will probably be kept up during the summer by those members who pass the vacation in Lawrence.

Miss Annie Mozley of the Freshman class skinned her first bird last week, and it was neatly done. This is as yet the only attempt at taxidermy, by any lady students of the University.

In the next number we will publish the donations of insects, birds &c., made to the University by the students during the past year. We understand that several members of the Freshman class intend to donate their entire collections. The collections of this class will in many respects surpass those of the same class last year.

EXCHANGES.—We welcome to our exchange list the *Industrialist.* from the Agricultural College, Manhattan, Kansas.

It is edited by President Anderson, and published every collegiate Saturday. Considerable space is devoted to Natural History. Long may it live.

With this number of the paper, we wish that all delinquent subscribers would pay up.

Prof. Miller talks of opening a private school during the vacation. There are few more accomplished teachers in his department. We see no reason why he should not be well patronized.

Miscellaneous.

FROGS.

Frogs or Ranidæ are Batrachian reptiles, devoid of tails. They have proven useful to mankind in several ways. They are destructive to insects, worms, and the like, feeding voraciously upon them in the adult state; on account of their great tenacity of life, often living for a long time when heart and entrails are removed, they have even been taken as subjects of experiment to illustrate the phenomena of human physiology. By reason of the sensibility of their muscles to galvanic currents, Galvani and Volta made important discoveries in electricity. In many parts of Europe they constitute what is considered a most delicate food. The development of the frog, from the egg to the adult, is well calculated to excite the admiration of the thinking person. When first hatched from the eggs, they are called tadpoles, living in water, feeding upon vegetable food. The gills with which they are provided rapidly enlarge until they reach a maximum, when they decrease in size and are finally withdrawn. After the animal has reached proper maturity, legs begin to be formed, first the posterior and then the anterior, and the tail is gradually absorbed. In time the legs are fully developed, and the lungs become fitted for the respiration of air, when they come forth in great numbers upon the land, especially after a rain, causing people to believe that it has rained frogs. Thus we see that the adult frog, a leaping, air-breathing and carnivorous animal, develops from the tadpole, a fish-like creature, breathing by means of gills in water, and feeding on vegetation. Their development is sometimes exceedingly rapid, often occupying only a few days, and it is believed that when the eggs are laid where there is no water, on the land, the frogs are hatched in the perfect state, their lungs being immediately adapted to breathing air. On the other hand, Prof. Wyman has found that the tadpole state can be prolonged for at least 2 years by the influence of darkness and low temperature.

The Bull Frog (*Rana pipieus,*) Spring Frog (*R. fontinalis,*) Leopard Frog (*R. halecina*) Common Toad (*Bufo Americanus*) and the Common Tree-Toad (*Hyla versicolor*) are known to inhabit Kansas.

CAMP YALE GEOLOGICAL SURVEY.

EDITOR OBSERVER:—A few items from Prof. Mudge's party may be of interest to the students. We left Manhattan on the first of April. Three weeks later we were shipping specimens to Yale College. We have shipped over seven hundred pounds of fine specimens, including two Pterodactyls, forty-two Saurians, of two genera and six species, Fish, &c. The Pterodactyls are quite large, having an expanse of from 15 to 20 feet. Their bones are not very well preserved and it is with difficulty that they can be procured entire. Thirty-two Saurians were well preserved. Two were nearly perfect and probably the best ever procured in America. The heads of these two were found in their natural shape, teeth in position. The other heads were nearly as good but crumbled on being exposed to the air.

A track had to be dug in the side of a hill through chalk, and from three and one half to five feet deep—three and a half feet wide. From fear that these heads would crumble, Mr. S. W. Williston made a drawing of them which may be used to illustrate the geology of Kansas. Five of the vertebræ were anchylosed, forming a ridge on either side three-eighths of an inch in height and one-half inch broad. In all probability this injury was due to a fight among its associates. It is seldom that distortions are found fossilized. The Flora is quite different from that in the eastern part of the state. The locusts are larger in this locality than farther east; no young of the "hateful locust" have yet been observed. Crustaceans of the lowest forms are found in the ponds. They are quite active moving through the water as nimbly as fish, nearly transparent. Some have been forwarded to Prof. Snow for further examination.

H. A. BROUS.

Ellis, Kansas, May 10, 1875.

The students propose to have a dinner on commencement day in the old University. Persons have been invited to address them, and undoubtedly a glorious time will be had. There will be a meeting of all the students in the old University hall on Saturday evening, the 5th.

Ornithology.

THE WHITE PELICAN.

BY PROF. F. H. SNOW.

A beautiful specimen of this bird in full plumage was sent to me April 19, by Dr. Connell of Thayer, Kansas. Upon dissection it proved to be a female, but the elongated feathers of the head and breast were unusually developed and *the horny crest or "button" on the upper mandible was fully formed.* There can be no question as to the sex of this bird, its ovaries containing eggs of all sizes from mere points to nearly an inch in diameter. It will thus become necessary to correct the statement of all our standard ornithological works that the "button" upon the bill of the pelican is peculiar to the males. The measurements of this specimen before skinning were as follows: length 55.87; stretch of wings 92.50; wing 22; tail 8.12; culmen 11.87; tarsus 4.95; 3tcl. 4.90. These figures coincide with Audubon's statement that the female pelican is smaller than the male.

BIRDS OF KANSAS.

EDITOR OBSERVER: I am glad to be able to announce the discovery of three new Kansas birds since the issue of the last Observer. These additions increase the Kansas list to 294 species. With a new correspondent, Louis Watson, M.D. of Ellis, located in the western part of the state, we may hope soon to reach the 300 species predicted by the writer in the first edition of the "Catalogue of the Birds of Kansas." The new birds are as follows:

292. *Dendroeca palmarum*, Yellow Red-poll Warbler. Taken at Topeka in migration by Edwin A. Popenoe. This species was mentioned in a previous number of the Observer as likely to be found in Kansas, having been taken in winter in Texas.

293. *Goniaphea caerulea*, Blue Grosbeak. Four specimens representing both sexes of this beautiful bird (taken May 17th, 22nd, and 26th, 1875,) have been sent to me by Dr. Watson of Ellis. It will doubtless be found breeding in Kansas. The species is essentially a Southern one, according to Dr. Coues, ranging from the Atlantic to the Pacific. Its occurrence in Kansas was to be expected.

294. *Archibuteo ferrugineus*, California Squirrel-Hawk. Taken at Ellis, in Western Kansas, by Dr. Lewis Watson. Two specimens, one captured in the fall of 1874 (length 24 inches and spread of wings 59½ inches) the other May 12th, 1875 (wing 17.75 in. tail 10 in. tarsus 3.31 in. 3tcl. 2.38 in.) The chestnut tarsal feathers crossed by some 20 narrow black bars, the large foot, and the unbanded tail render the identification of these birds unquestionable. But the most valuable point in connection with the discovery of this bird in Kansas is the fact that specimen No. 2 was shot *while leaving its nest.* As Dr. Coues speaks of the accounts given of the nidification of this species as "not authentic," I quote Dr. Watson's description of the nest. "The nest of *Archibuteo ferrugineus* was in a large-trunked dead Cottonwood tree situated on the edge of a ravine 75 yards wide. The moderately abrupt bluff, at the tree, was about 12 or 15 feet high. No other tree in sight except at a distance. The nest was about 20 feet from the ground, and about midway of what remains of the tree. It was composed of dead branches and sticks, was large and deep—two feet or more in diameter—and was lined with the inner bark of the Cottonwood, evidently ready at hand as a quantity of it was exposed on the trunk and fluttering in the wind. The nest contained four eggs, two being about equally "splotched" at the smaller end, the third less marked and the fourth nearly white, especially on one side. There need not be the least doubt about the authenticity of these eggs. I shot the female on May 12th, seeing her leave the nest. I shot her while hovering around and screaming at me at the foot of the tree. The nest has been abandoned since. I have been to the tree several times and observed nothing indicating its occupancy." A previous letter informed me that a brood of young Hawks was raised in this nest in 1874, specimen No. 1. being one of the parent birds. Through the kindness of Dr. Watson the four eggs of the above mentioned series have been added to the University collection.

F. H. SNOW.

Lawrence, Kansas, May 31st, 1875.

☞ A drove of twenty-seven swallow-tailed hawks (*Nauclerus furcatus*), were observed near the Wakarusa, May 1, by Jesse Batdorf.

☞ Since Miss Mozley's attempt at skinning birds, Miss Dora Wade has shot and skinned one. Let the young gentlemen take off their hats.

☞ Of all the birds brought in to Prof. Snow and skinned by him, only one has been found to eat grasshoppers. This was the yellow-billed Cuckoo, (*Coccyzus Americanus*). The Kingbird, (*Tyrannus Carolinensis*), Catbird, (*Mimus Carolinensis*), and the red-headed Woodpecker, (*Melanerpes erythrocephalus*), have been said by eye-witnesses to feed upon them; but mere sight is not sufficient proof to scientists, unless the insects can be seen in their very crops.

☞ Since the publication of Ornithological Notes, No. II, Thos. Gaumer has been keeping track of the birds. Thirty additional birds have come under his observation, some of which have been exceedingly rare. Among these may be mentioned the Yellow-winged Sparrow, (*Coturniculus passerinus*,) which has never before been taken at Lawrence. A nest of this bird was found by E. A. Popenoe, of Topeka, in 1872, with nine eggs.

Also the Cærulean Warbler (*Dendroeca cærulea*), and the Marbled Godwit (*Limosa fedoa*), were captured, they being new to the University Museum.

The list of birds observed since the opening of spring to the present time, now numbers 131 species.

Entomology.

THREE DAYS AMONG THE GRASSHOPPERS.

BY G. F. GAUMER.

For a week or more, wonderful reports have been coming in from all parts of the country about the immense swarms of locusts (or grasshoppers) that have hatched in favorable localities and are now spreading out and devastating the land. These reports seemed to be too much exaggerated to be believed. In order therefore to satisfy myself I took a horse and buggy and started, on Saturday May 22, at 5 o'clock in the morning to investigate the matter. During the first two hours the locusts were all quiet, resting upon weeds, fences, and in fact every thing upon which they could climb. In the south part of the city they had crawled up the sides of houses until they had completely covered them from top to bottom. About 8 o'clock, when the air was getting hot, they began to climb down from their resting places; some went to eating, but the largest proportion of each colony, (for they go in colonies) began to hop along as lively as possible.

The general direction of their line of march seems to be in a south-eastern di-

rection throughout the most of Douglas County.

This, however, like all other general rules, has its exceptions, and the only rule that seems to hold in all cases is that they are always bound for the nearest wheat field, potato patch, or any thing else that they can eat,—and there are but two or three things, either tame or wild, that they do not devour. Every one seemed to be inspired with the laudable ambition of outstripping his fellows in the race across the field. Many times I saw large swarms approaching a field of grain and stopped to watch them as they came hopping along. This travelling continued until about 4, P. M. when a thunder cloud appeared in the north. The locusts then began to gather together in compact form, arranging themselves upon patches of bare ground (and such patches are very numerous now) with their heads turned either north or south; never did I observe one face the east or west, and if by accident one hopped crosswise it caused quite a commotion among those next to it. They continued travelling southward until the middle of the afternoon when they went more slowly and did more eating. At this time it was my good fortune to come upon a colony that were just in the act of moulting their skins, I think for the third time.

This is an interesting and important event in the locust's life, for each time it casts the old skin away, it gets a new and much larger one that will hold more grass than the old one. The locust climbs up a weed, grass blade, tree or any thing else a few inches above the ground, and turning its head downward grasps firmly the support with its feet; then it stretches the hopping legs as far up as possible and hooks them fast, and remaining perfectly quiet for a few minutes, during which time it very gradually contracts the body in length, expanding the thorax or main body, presently the skin bursts from head to abdomen; then there is another quiet of a few minutes, after which, by successive twitches, the animal extricates its body. All is then removed except the hind legs, and this is somewhat more difficult, but it carefully pulls a little at a time on one leg and then on the other, until they come out.

This whole process takes about ten minutes, when the new-born locust emerges and generally drops to the ground. Its legs are so soft and tender that they bend when it attempts to walk. There is then no food in the stomach, or at least very rarely, and the insect is almost helpless and "awful hungry." In this condition it struggles about, trying first to crawl, and then to hop, until at length its legs become stiffened. In a couple of hours after it has moulted it has filled itself with vegetation. It is exceedingly interesting to watch these voracious villains eating potato tops, or some other tender vegetable. With watch in hand, I watched one of the largest size, while in the act of eating potato leaves, for forty minutes, and in that time it devoured three leaves, more than three times the weight of its own body. This at first seemed incredible, but from multiplied observations, I am certain that they have eaten their weight of young tender leaves in less that ten minutes.

The next wonder is, how do they digest all their food? This is rather a puzzling question to me, but I am of the opinion that there is not much digestion about it, though the excrement matter passes from them very finely pulverized and in regular form, it evidently having gone through a process of grinding and squeezing. A very small proportion of the amount of matter taken is ever appropriated to the growth of the insect's body. On the third day of my stay in the country, I endeavored to find out whether much damage was being done to crops in general. I devoted a large portion of the day to traveling over the country as rapidly as possible. An immense colony of locusts about a mile west of Vinland started into a man's farm at 10 a. m. Saturday morning, and at 5 p. m. Sunday, his field of timothy and clover, about 10 acres of oats and as much flax, and besides a field of potatoes and another of corn had been stripped clean, nothing being left but a short stubble. This is but a sample of their operations in some parts of the county. When it is remembered that they will stay with us at least a fortnight yet, and that they have just commenced to eat, it will be seen that they have plenty of time to do great damage. It only remains to be seen whether they will or not. There are several birds known to feed upon them, and I have in my room a land turtle, a toad and a snake, which eat them voraciously.

☞ Very few potato beetles have made their appearance yet.

☞ The young ladies of the Freshman class deserve unbounded praise for the dauntless manner in which they pursue the study of insects. Before commencing the study it would scarcely have been possible to hire them to touch a bug, but now big black spiders, ugly green worms, beetles, and every thing have to give way beneath their clutches. Who will say that the study of natural history is not a good thing for young ladies?

☞ Who will get the prize for the best collection of insects?

☞ Butterflies and moths are exceedingly rare. There seems to be a poor prospect for collec ing in Lepidoptera during this season.

☞ The first full-fledged grasshoppers of the season were observed on Sunday, May 30. On Thursday the air was filled with them, making their way northward, with the wind.

☞ Miss De Etta Warren and Miss Kate Williams, of the Freshman class, have taken charge of one of Prof. Snow's insect cages, and have filled it with a good supply of larvæ.

☞ Miss Kate Williams captured at Franklin several specimens of the 8-spotted Forester (*Alypia octo-maculata*). This moth seems to be quite rare, the above being only the second capture made hereabouts.

☞ Very few Cecropia moths have been found this spring. Very few of the larvæ of last summer came to maturity, for during the winter it was almost impossible to find a living cocoon. A year ago last winter one of the students succeeded in getting about thirty, all but one of which hatched.

☞ Maple-worm Moths, (*Anisota rubicunda*) were first seen on May 27. Last season at that time there were immense numbers of them hatched out. Their scarcity this year may be accounted for by last summer's drouth, the larvæ having been prevented from coming to maturity.

CHINCH BUGS.—These pests have made their appearance by the million in the country. They are now laying their eggs in oat and wheat fields. In a society discussion on the subject of chinch bugs, last fall, the following questions were asked by one of the members, but remain unanswered: 1. Does the male hybernate? 2. Do quails and prairie chickens feed upon them? 3. How many broods are there in Kansas?

As to the question whether prairie chickens ate them, Mr. Gaumer stated that he knew of a farmer who had killed some chickens and the flesh was so impregnated with the odor of the insect that they were unfit to eat. We would gladly receive answers to any of the above questions from those who have an opportunity of examining into the matter.

THE OBSERVER OF NATURE,

A monthly paper, published by the

NATURAL HISTORY SOCIETY OF THE KANSAS STATE UNIVERSITY.

W. OSBURN, Editor and Proprietor.

TERMS—Twenty-five cents for a school term, in advance. Single copy, five cents.

The paper will be sent, post paid, to all subscribers from abroad. Correspondence invited.

University Matters.

☞ Janitor Baillie announces himself as professor of Domestic Economy.

☞ The students in natural history of Earlham College, propose to organize a society. Success to them.

☞ Janitor Baillie found the other day a dead blue bird in a state of perfect preservation.

☞ Geo. Gaumer captured the other day a turtle which had never before been taken in this locality. It was the soft-shell turtle, *Aspidonectes spinifer*.

☞ F. W. Barteldes has donated to the University the skin of the largest Jack Rabbit brought to the Lawrence market during the past year.

EXCHANGES.—*Canadian Entomologist*, *Psyche*, *Earlhamite*, *Industrialist*, *Deaf-Mute Index*, and *Young Sportsman*.

☞ Nimrod, *alias* W. E. Stevens, says that if many more commencement assessments are made it will be necessary to have a receiver appointed to settle his affairs.

☞ W. H. Carruth, the searcher after Greek roots and botanical specimens, has recently delivered a ninety-minute lecture on Tennyson's poetry to an unappreciative audience of Oreads.

☞ Prof. Carruth wishes three specimens of each species of Kansas plants for Prof. Baird, to represent the flora of Kansas at the Centennial. He would gladly receive assistance from any in the State interested in the study of botany.

☞ His dignityship, the Orophilian clarinetist, bought a razor the other day for the purpose, he said, of trimming his corns. Next morning the scarred and lacerated condition of the gentleman's top lip served either to suggest doubts as to his veracity or excite inquiry as to the phenomenon of "facial corns." Rather good on William.

☞ The Senior class of this year contains seven members, being as large as the two previous graduating classes combined.

They propose to have a grand reception on Thursday evening, the 15th. All students of the University are cordially invited to attend. Tickets can be obtained at Ross's book store.

OREAD.—The Oreads have been hard at work preparing for their anniversary. The musical feature of the exhibition will be excellent. The programme is supported by some of the ablest performers in the University, and is as follows: Opening address, A. Wickersham: Oration, A. C. Scott: Paper, Alice Goss: Debaters, E. Bierer, Jr., and Alma Richardson: Paper, J. H. Long: Oration, Miss May Richardson. All are invited.

☞ Last Thursday, as Prof. Bardwell was engaged among his skyscopes in the University observatory, a bold, bad stroke of lightning entered the building and passed several times around the room, reaching out its cold, clammy claw for the Professor's "checks." Our astronomer, however, is a lightning proof lightning calculator, and his assailant soon discovering this fact, left for parts unknown. *Gaudeamus*—we rejoice.

☞ The students are all doubtless aware that in order to obtain a first-class grade one must average for the four collegiate years over 90. By a precedent lately established by the faculty, the one who graduates with the highest honors receiving the highest grade in the class, is given the closing oration. The one receiving the next highest grade has the opening oration. Not more than seven out of any class are to be allowed to have orations on class day.

☞ Since our last issue the chapel speaking has been very fine. Miss Vara Gunn ventured upon Poe's "Bells," and did the piece a belle's justice. Many consider it the best performance of the year. J. T. Harris rendered a base solo, and was encored. H. C. Burnett reminded us once more not to set our affections on worldly wealth. Timmons and Clarke both resolved not to "waste the night in words," a resolution which they have since discarded· and many other brilliant speakers have sparkled before the dark back ground of professional dignity.

☞ The society were prevented from having their proposed hunt by the inclemency of the weather. The Freshman class happened to select a fair day and went to the lake north-west of the city. They succeeded in getting 1000 insects and a few birds.

☞ The High School of this city is to have a graduating "time" at the close of the school term. The Hon. T. D. Thacher is to deliver an address. We understand that Miss Mary Murray and Mr. Frank Miller are the only two pupils who accept the honors of the occasion. These graduates and other members of the senior class will no doubt pass into the University, where they will again have the educational assistance of Prof. Miller, who while principal of the High School was so popular among all his pupils.

☞ A certain gay and festive Soph. who is fond of assembling himself together on Sundays, and other State occasions at the brick meeting house northwest of town, says that:

> When Dutch meets Dutch
> Then comes a tug at beer.

And he is ever careful to add:

> ——— This I know,
> For a Junior told me so.

This classical youth is not the one whose balmy breath ever and anon wakens the latent melodies of a cracked flute, whose pearly teeth are wont to clasp the dapper end of a four-story meerschaum, whose ardent lips are so fond of encompassing the available end of a little brown jug, whose true inwardness leadeth him even to the free lunch, and who, above all things delights to be left alone with a full half bushel of shop-worn oranges!

OROPHILIAN.—The Society Hall has been overcrowded for several evenings past, and the performances have been remarkably good.

At the last meeting Miss Ida Cramer favored the society with the "Bridge of Sighs." She has a beautiful voice and a distinct articulation, and her recitation on this occasion was exceedingly well done.

The anniversary of the society will be held in Liberty Hall, on Monday evening, the 14th of June. The exhibition is free, and all should attend it. The programme is as follows: Opening address, H. S. Tremper: Oration, W. Osburn: Affirmative of the Debate, G. F. Gaumer: negative, F. P. Clark: Declamation, Miss Lou Rankin: Paper, Miss Mollie Herrington: Oration, H. C. Burnett. The music is in the hands of Prof. Bartlett. It will commence promptly at a quarter to eight.

Map of the State of NEBRASKA

BY

J.H. NOTEWARE

State Superintendent of Immigration

OMAHA NEBR 1875.

Approved by the State Board of Immigration

J. H. NOTEWARE — PRESTᵀ OMAHA NEB.

JOHN D. NELIGH — SECᵀʸ WEST POINT "

J. J. ROBERTS — AUD. ASPINWALL "

Capital ✻ LINCOLN
County Towns ✻ Columbus
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in progress
proposed
Distances on Railroads indicated thus ... miles
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Map showing the Railroad Routes between the SEABOARD and NEBRASKA.

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Maps of Nebraska

Grasshopper. Hatching Swords 1875.

THE GRASSHOPPERS.

OMAHA, May 14.—Young grasshoppers are swarming in the southern tier of the counties of Nebraska. The *Herald* special from Richardson Co. says they are carrying every thing green in that county before them.

ST. JOE, Mo., May 14.—During the last few days the grasshoppers have assumed an alarming aspect. The weather has brought these little insects out in full force, and farms in this neighborhood are black with them. They are doing terrible damage to wheat and oat crop as well as to gardens.

INSECT PESTS.

ST. LOUIS, May 15.—Immense swarms of chinch bugs are flying about Clinton and adjoining counties, and myriads of young grasshoppers are swarming over several of the western counties of this State. Great apprehension is felt for growing crops.

THE GRASSHOPPERS.

ST. LOUIS, May 19.—A Kansas City special to the *Republican* says farmers from various parts of Jackson and Clay counties continue to bring in news of the ravages of grasshoppers. The grass has been nearly destroyed, and wheat and oats have suffered terribly. The only salvation for the crops is the departure of the grasshoppers, which many of them are taking. Thousands also are dying, the ground in many places being covered with dead ones. The crops in many places beyond the western tier of the above counties are excellent.

The Grasshopper Plague — Alarming Prospect.

ST. LOUIS, May 27.—A special to the *Republican* from Kansas City says three hundred farmers of Jackson County met at Independence to-day to devise means of relief to the destitute and suffering. Reports from all parts of the country were that grasshoppers are destroying all crops and fruits. The meeting resolved to issue an appeal, calling on people of the county to resist helpless farmers, who are cutting down tress for their stock to eat their leaves, straw being fed to cattle. One farmer said half of the farmers will be objects of charity in three months.

DROWNING THE GRASSHOPPERS.

KANSAS CITY, MO., May 28.—Twenty-four hours' rain has done some slight damage to fences, roads and growing crops, but has done incalculable good in drowning out grasshoppers, which were washed into the streams in such quantities that the Missouri River opposite this city was black with them.

Fish & Birds ? Longspur

OBSERVER OF NATURE.

VOL. 2. LAWRENCE, KANSAS, THURSDAY, MARCH 4, 1875. No. 1.

The Natural History Society

OF THE

Kansas State University

MEETS ONCE A FORTNIGHT, AT THE NEW University Building,

On Thursday Afternoon, at 2 1-2 o'clock.

The exercises consist of papers, a general discussion, and the Observer of Nature.

"QUI VIDET, SCIT."

THE OFFICERS OF THE SOCIETY ARE:

President	ANDREW ATCHISON.
Vice President	Miss ANNA E. MOZLEY.
Recording Secretary	JOHN D. LAMBERT.
Corresponding Secretary	Prof. F. H. SNOW.
Curator	GEO. F. GAUMER
Editor	WILLIAM OSBURN.
Critic	W. S. HERRICK.
Treasurer	Miss ANNA HANCOCK.
Marshal	W. M. DUFF.

Sent by

TO THE FRIENDS OF THE UNIVERSITY.

In submitting the first number of the *Observer* for the current term, we wish to tender our sincerest thanks to those who have kindly encouraged us with their subscriptions. Four numbers of the paper were printed during the latter part of the last school year; five numbers will be published this term. Its contents will be more varied than they have been in the past, so that it will doubtless contain something of interest to every lover of nature.

Its objects are, as heretofore, to represent the best interests of the University, to inspire its readers with some enthusiasm in the ennobling study of nature, and if possible to be instrumental in making some valuable additions to the storehouse of Natural History.

Though the *Observer* is still small, yet when we remember that both the paper and the University are still in their infancy, and when we take into consideration the hard times, we think it best to be satisfied with the paper in its present dimensions. Nature, however, teaches us that small things are not to be despised. One little snow-flake, though sometimes scarcely visible to the naked eye, should not be overlooked, for it is capable of assuming a hundred different forms, and when to it are added the millions of flakes that compose the mighty snow storm, even the locomotive is checked in its course. A single chinch bug, insignificant as it may seem to some, is not to be despised, for connected with it are mysteries that man may never solve, and when with it we consider the myriads more that exist, we find that the farmers' crops are destroyed, and destitution stares Kansas in the face.

We hope that the *Observer* may not be overlooked by reason of its small size. Rather, when we remember the praises it has received from eminent naturalists in the past, when we consider the objects of the paper, and the grand subjects of which it treats, may we hope that it will fill some blank in the history of science, and grow with our growing institutions and with an increasing love for investigation into the arcana of nature.

SOCIETY PROCEEDINGS.

The society met in the Zoological laboratory of the University, on Thursday, January 28.

An interesting paper was read by J. D. Lambert upon the Solanaceæ, or Night-Shade family of plants.

A. Atchison read the *Observer of Nature*, which contained two articles on the Antennæ of Insects, and two upon the Lapland Longspur. Of the two latter, one was written by Miss Anna Mozley, and the other by Geo. F. Gaumer. Having been requested to publish something upon the Lapland Longspur in the first *Observer*, we have made brief synopses of these articles.

Miss Mozley described the bird and gave its history. The Lapland Longspur (*Plectrophanes lapponicus*) belongs to the family Fringillidæ, and can generally be recognized by the broad collar of chestnut upon the back of the neck. It is a resident of the arctic regions, and belongs to both continents. In Europe only a few have been found, and these in company with the Horned Larks (*Eromophila cornuta*) in the British islands. "According to Richardson, its nest is built in moist meadows on the shores of the Arctic sea. The nest is composed externally of dry stems of grass, woven to a considerable thickness, and is lined neatly with deer's hair. The eggs, five in number, he describes as pale ochre-yellow, spotted with brown." Its summer habitations are Norway, Sweden, Spitzbergen, Iceland and Greenland. Upon the arrival of winter they migrate south into warmer climes. These are the birds that have been seen during the past winter in immense flocks upon Mount Oread, and which the young boys of the city have often amused themselves in killing with stones. They are frequently found in company with Horned Larks and Painted Longspurs (*P. pictus*), but this winter they have generally been seen in large flocks by themselves. Upon the approach of a mild day, they have suddenly disappeared, but have again returned upon a change of weather. The winter that will drive these little birds so far from home must be extremely cold.

Mr. Gaumer's article contained some interesting observations he had made concerning these birds. He observed a large flock of Lapland Longspurs feeding in a field south-east of the city. Sometimes when disturbed they would rise with a shrill scream, and describing a curve of half a mile or so in circumference, would light in the same place from which they had started. Again, one rising from the midst of the flock with a scream seemed to electrify the whole flock. They would then ascend at a slight angle about twenty feet, and circling round, would soon alight. At one time when a flock was rising from beneath a telegraph wire, he noticed five birds strike the wire, two of which fell dead, one was crippled too badly to fly, and the other two, after recovering from their dizziness, were enabled to join the flock. Upon this he commenced searching for the birds, and succeeded in finding thirty-two specimens in a distance of half a mile beneath one wire. Some of these had lost their heads, others were injured internally, and others again were still alive.

This is not the only bird that is killed by the telegraph wires; he had frequently found prairie chickens, warblers, plovers, snipes and sparrows beneath them. Many thousands of beneficial birds are annually killed by the wires that now form a complete network all over this broad land. It is an established fact that when civilization comes into a country many of the birds disappear and noxious insects increase at an alarming rate. Upon examining the crops of these birds he found that they were chiefly filled with grass-seeds. Every specimen, however, contained some grasshopper eggs. The highest number of eggs found in any one bird was eight.

A Marsh Hawk (*Circus Hudsonius*), which has made its head quarters upon Mt. Oread, for the last month or so, was shot the other day, in the act of devouring one of these birds, by one of the members.

THE FISHES OF THE KANSAS RIVER AS OBSERVED AT LAWRENCE.

BY PROF. F. H. SNOW.

The recent proposition to introduce into our river the eggs of some of the more valuable fishes of the Eastern States has suggested the propriety of enumerating the native species with which the river is already stocked. Some of these are so abundant in their season as to furnish occupation and food to no small portion of our inhabitants, especially since the construction of the dam, which has greatly enlarged the facilities for their capture. The following list is not intended to be exhaustive but only to include the most characteristic forms.

SAURIDAE.—Gar Pike Family.
(Fishes with cartilaginous skeletons.)

This family contains the only living representatives of the ancient sauroid fishes whose fossil remains are found in great abundance in the earth's crust. Their most striking peculiarity is the coat of armor which protects the entire body. This armor is composed of smooth, enameled plates of a rhombic form, arranged in oblique rows and so hard as to be almost impenetrable. Two species are found here.

1. *Lepidosteus osseus* Linn. The Long-bill Gar. This species attains the weight of 9 lbs.

2. *Lepidosteus platostomus* Raf. The Short-bill or Duck-bill Gar, which does not exceed 5 lbs. in weight.

These two species are exceedingly voracious, devouring great numbers of small fishes, which they swallow after the fashion of alligators. They are the inveterate enemies of the fisherman, since they strip his hooks of their bait. This they do with impunity as their long bony jaws present no soft portion for the hook to penetrate. They are frequently taken in nets.

STURIONIDAE.–Sturgeon Family.
(Fishes with cartilaginous skeletons.)

3. *Acipenser maculosus.* Well known to our fishermen under the general name of Sturgeon. The largest specimen taken weighed 26 lb.

4. *Scaphirhynchus platyrhynchus* Girard. Paddle-fish; Shovel-fish; Shovel-nose Sturgeon; Spade-fish. This fish is found in great numbers, varying in weight from ½ lb. to 7 lbs. Its flesh is coarse and rank. The rows of sharp-pointed bony plates upon its back and sides necessitate caution in handling.

5. *Polyodon folium* Lacepede.—Spoonbill Sturgeon; Paddle-fish. Previous to 1874 only two specimens of this curious fish had ever been taken at Lawrence, but since the building of the dam several have been taken, varying in weight from 1 lb. to 20 lbs. and in length from 2 to 5 feet. The most noticeable peculiarities of this species are as follows: the absence of the bony plates upon the body and head which characterize the other members of the sturgeon family; the remarkable elongation of the snout, which is compressed into a thin leaf-like organ, partly cartilaginous and partly membranous, nearly as long as the entire body; and the extension of each gill-cover into a long membranous flap or streamer. The young fish differs from the adult in the absence of teeth on the jaws, and was described by LeSure as a distinct genus and species.

PERCIDAE.—Perch Family.
(This and the following families have true bony skeletons.)

6. *Labrax chrysops* Grd. Striped River Bass; White Perch; Rock Perch. In this species the upper part of the head and body are olivaceous, the sides are silvery and the lower parts whitish. Common. Its flesh is good eating and it varies in wt. from 2 lbs. to 5 lbs.

7. *Lucioperca Americana* Cuv.—Pike-perch; Wall-eyed Pike; Jack-pike; Salmon. Distinguished from the other fishes of the family by the greater gape of its mouth, and by the position of the ventral fins and anus. The back is reddish-olive, the sides olivaceous, the under parts yellowish or whitish, with blotches of black or brown upon the back and upper portion of flanks. This fish appears in the river very early in the spring and very late in the fall. Its flesh is very palatable and its greatest weight is about 7 lb. It has no fine bones in its body like the common perch. Its food consists of small fish.

8. *Ambloplites aeneus* Agassiz.—Rock Bass; Goggle-eyed Bass; Black Sunfish. This fish is rare in the main river but not uncommon in its tributaries. The greatest weight attained is 1½ lb. Its superiority for table use, in which it compares favorably with the best New England species of this family, would recommend it as a suitable fish for "cultivation." A blackish spot at the base of each scale and a very conspicuous jet-black patch near the upper and posterior angle of the gill-covers are characteristics by which this species may be distinguished.

9. *Pomoxys hexacanthus.* White Bass; Six-spined Bass. Similar to the preceding in form but larger, often reaching the weight of 8 lbs. This species also is rare, not more than 3 or 4 individuals being taken in a season by a single fisherman.

10. *Pomotis luna* Agassiz. Western Sunfish; Moon Sunfish. Very common, differing little, except in size, from its Eastern representative. The largest specimens weigh ½ lb.

11. An undetermined species of this genus, commonly called Pumpkin-seed, is distinguished by its small size (never exceeding 1 oz. in weight) and by the bright red color of its fins.

ANGUILLIDAE.—Eel Family.

12. *Anguilla Bostoniensis* LeS.—Common Eel. This was formerly considered as distinct from the eastern eel, but the two forms are now regarded by the best authorities as identical. This species is occasionally taken with the hook, sometimes of 6 lbs. weight.

SILURIDAE.—Cat-fish Family.

13. *Pimelodus atrarius.* DK. Common Horned Pout; Bull-head. This, the smallest species in the family, is rarely taken in the river, its natural home being in more sluggish streams. It is found in great abundance in Mud and Turkey creeks and in the standing pools called "lakes" and "sloughs." It never exceeds ¾ lb. in weight.

14. *Ictalurus furcatus* Gill. Blue Cat-fish; Fork-tailed Cat-fish. This is to the fishermen the most valuable species in the river, since it is quite abundant, is frequently of very large dimensions and is always marketable. A specimen seen by the writer weighed 175 lbs. Tradition is positive that in the days of '56, a fish of this species was captured, weighing 250 lbs., which required the aid of a steamboat tow-line and a yoke of oxen for its safe deposit on the river bank.

15. *Ictalurus nigricaus* Gill. Black Cat-fish. Maximum weight, 45 lb. Some specimens are uniformly black, others have light spots or blotches upon the sides.

16. *Ictalurus cupreus* Gill. Great Yellow Cat-fish. Like No. 13 in form, but of a coppery yellow color. The largest specimen weighed 188 lbs.

17. *Ictalurus caerulescens* Gill.—Channel Cat; Silvery Cat-fish. This very palatable fish is taken of all sizes from ½ lb to 15 lbs. It is used by the fishermen as bait for the larger species already mentioned.

18. *Hopladelus limosus* Raf. Yellow or Mud Cat-fish. Very common and distinguished by a profusion of small bluish spots upon a dingy yellow ground. Its greatest weight is 100 lbs.

CYPRINIDAE.—Sucker Family.

19. *Bubalicthys Bubalus* Agassiz. Buffalo Fish. Very abundant, ordinarily weighing from 4 lb. to 20 lbs.; maximum weight, 40 lbs. This fish, on account of its abundance, is much eaten, though not of the most delicate flavor. It has a very tender mouth, so that it can hardly be taken into the fishing boat without the aid of a net.

20. *Moxostoma oblongum* Agassiz. Chub-sucker, often called Carp. This species never exceeds ½ lb. in weight.

21. *Ptychostomus aureolus* Agassiz. Red Horse. This fish varies from 6 ozs. to 8 lbs. in weight.

Several other species occur in this family, among which may be mentioned (22) the White Sucker, (23) the Blue Sucker, both of which are considered excellent eating, and (24) the Will-back or White-fish.

CLUPEIDAE.—HERRING FAMILY.

25. *Hyodon turgisus* LeS. River Moon-eye; Hickory Shad; Missouri Herring. Freshwater Herring. Color yellowish or whitish with metallic reflections; body much compressed laterally. This species is common and is excellent in flavor, but is little eaten on account of the multiplicity of its small bones. Greatest weight, 2 lbs.

HYPONOMEUTA WAKARUSA. *New Species.*

BY G. F. GAUMER.

Last May, while collecting in the Wakarusa valley, my attention was called to a small caterpillar, observed in great numbers on the Waahoo (*Euonymus atropurpureus*), devouring the leaves, and thus defoliating the largest and most vigorous of the bushes. On the 24th of May I collected a hundred or more of these larvæ and placed them in a breeding cage to watch and study their transformations.

As soon as hatched from the egg, these caterpillars spin a web upon the branches, and as they grow in size this web is extended until it takes in all the foliage of the bush. Upon first placing the larva in the cage I found it unable to walk upon the smooth surfaces of the glass sides. But it at once began to construct a road over which to travel, by spinning a web, which it fastened with its jaws to the glass by a sweeping motion of the head from side to side, and in this way it moved along quite rapidly. They fed voraciously upon the leaves for about six days, when, having attained their full size, they were ready to transform into the chrysalides. On May 30, the caterpillars began to make their cocoons, some in the corners of the cage and others on the leaves. They remained in the chrysalis thirteen days, when they began to transform into the imago or perfect moth.

This species differs from the others of its genus in size, and in the number of the spots, and in the darker coloring of the wings in the female. I captured one of the moths in the summer of 1871, and have never been able to find a description of it. I have, therefore, called it the Waahoo Moth, a name descriptive of the food plant upon which it lives.

The following is a description of the *Hyponomeuta Wakarusa, N. Sp.*, as it appears in its different stages:

Larva—Length, when full grown, 0.63 inch; color, light greenish, with three rows of small black dots on each side, one to the segment in each row; besides these there are also two rows of two dots to the segment, the dots in these rows being placed one in front of the other; the feet and mandibles are black; head same color as the body; the body is thinly set with long bristles.

Chrysalis.—It is 0.37 inch in length; light green at first, but afterwards deepening in color until it becomes a chestnut brown; the wing covers are at first slightly tinged with yellow.

Imago.—Female, satin white above, with about fifty-one small black dots on each of the primaries; these dots are arranged in rows, two of which run along the posterior margin and bend round toward the apex where the outer row ends; the inner one is continued along the anterior margin back to the base of the wing; another row situated within the latter runs from the base towards the apex; the secondaries are dark ashy gray above deepening toward the apex; beneath, the wings are all very dark gray, except the fringe, which is always very long and pure white; the front margin of the primary is black at the base, fading in color toward the end; there are black dots on the thorax; eyes, dark brown; the first pair of legs dark gray in front; all the other legs and the antennae, white; abdomen white and slightly tufted at the extremity; the average length is 0.37 inch, spread 0.90 inch.

The male differs from the female in having fewer spots on the wings, the average number of which is 45, and in having the secondaries uniformly white on both sides, the under sides of the primaries being also white; the black on the legs is less distinct or wholly wanting; the anterior margin of the primaries is white. The males are often as large as the females, but the average is somewhat smaller, the length being 0.35 inch and the spread 0.88 inch.

This description was taken from 35 bred specimens.

DIPTERA.

BY J. D. LAMBERT.

No description could locate this order of insects better, or give it greater prominence in the mind of the general reader, than the mere mention of the general name which has been commonly applied to insects of this class—flies. No class of insects form such a constant source of annoyance to man as the *Diptera*, or two-winged insects. Others may be more painful or dangerous in their bite, but no other order can muster for attack in such multitudes. They are generally small in size, and many are very minute, but they make up in numbers what they lack in bulk. The number of species, and the swarms of individuals of each, are immense. Diptera have a wider geographical range than other insects. No district on the face of the habitable globe, is free from them. *Culicidæ*, mosquitoes, are scattered over the earth, from the tropics to the polar regions. They appear among us as the harbingers of spring. Their disappearance betokens the coming winter. Many species are blood suckers, and at the same time live upon decaying vegetable matter; as examples of such may be cited gnats, mosquitoes, and flies proper. Some, from their habit of living in vegetables, flowers, and other substances eaten by man, often produce sickness, and physicians are frequently called upon to treat cases where stomachs of patients contain insect larvæ.

Diptera have two wings, and two knobbed threads called balancers, in the place of the hind wing, and a mouth formed for sucking or lapping. The larvæ are without feet, and are called maggots, and have their breathing openings generally at the hind extremity. The species of North America thus far described amount to 2,500, though it is probable that the aggregate is over four times that number. In Europe there are 10,000 known species. Space will permit mention of but a few of them.

The Hessian Fly (*Cecidomyia destructor*) is a black, gnat-like insect, one-tenth of an inch long. It breeds twice a year; the eggs hatch into pale red maggots in about four days. The larvæ live upon the sap of growing wheat, causing the plant to wither. The Hessian Fly was so named from the belief that it was brought into this country in straw, by the Hessian troops under Sir William Howe.

The American Wheat-Fly (*C. tritici*), is about as large as the preceding, orange colored, producing little yellow maggots, which prey upon wheat in blossom and in the milk and thus prevent its filling.

Tabanidæ, or Horse Fly family, need no description. They are among the largest of the Diptera, and are notorious for their attacks upon horses and cattle. The genus Tabanus contains the Black Horse-Fly (*T. atratus*), the Orange-belted Horse-Fly (*T. cinctus*), and the Lined Horse-Fly (*T. lineola*).

The Oestridæ, or Bot-Flies, are the pest of all who have the care of horses, sheep or cattle. These insects deposit their eggs while flying, and their larvæ infest various parts of the bodies of herbiverous animals. More than twenty species of Bot-Flies are known, though not all are natives of this country. The large Bot-Fly (*Gasterophilus equi*) lays her eggs upon the fore legs of the horse; the Red-tailed Bot-Fly (*G. haemorrhoidalis*), lays hers upon the lips, and the Brown Farrier Bot-Fly (*G. veterinus*) under the throat. The irritation causes the horse to bite the parts thus infested, and the larvæ getting into the mouth pass through the throat to the coating of the stomach, where they cling till fully grown. The Ox Bot-Fly (*Hypoderma bovis*) is found in the larval state in May and summer in tumors on the backs of cattle, and when fully grown work out and fall to the ground; the fly appears about a month later. *Cephalemyia ovis* lays eggs in the nostrils of sheep, and the larvæ by crawling into the cavities of bones of the head often produce death. The reindeer, hare, squirrel, opossum, and field mouse each have a certain species to infest them, and a species of the genus Dermatobia is found beneath the skin of man in tropical America.

THE OBSERVER OF NATURE,

A monthly paper, published by the

NATURAL HISTORY SOCIETY OF THE KANSAS STATE UNIVERSITY.

W. OSBURN, Editor and Proprietor.

TERMS—Twenty-Five cents for a school term, in advance. Single copy, five cents.

The paper will be sent, post paid, to all subscribers from abroad. Correspondence invited

University Matters.

WANTED—A few more subscribers to the *Observer*.

LOST—The Sophomores in General Geometry.

REMOVED—The furniture of "the Devil's den."

Mr. Baillie, the janitor, has entertained 450 visitors during the past term.

☞ There are about one thousand ornithological specimens in the University museum.

Subscribe for the *Young Sportsman*. The subscription price is only ten cents for six months. Arthur Blood is sole proprietor.

We learn from good authority that every absence from chapel exercises is made to affect the grade of the absentee. How about unfaithful members of the faculty?

Of what two great poets may our literary societies boast? The Orophilians of a Tenny-son, and the Oreads of a Longfellow, Hugh Richards, he being 6½ feet in that direction.

Prof. English was so unfortunate the other day as to lose a roll of money, amounting to about $45. The money was found and restored to its owner by John M. Walker, a student who believes in the "best policy."

☞ We received of late number 1, volume 7, of the Canadian *Entomologist*. This is an exceedingly interesting sheet on Entomology, and is published at London, Ontario, by the Entomological Society of that place. This number contains descriptions of several new species of moths.

We hear that the Professors talk of making some changes in the manner of conducting recitations at the beginning of the next year. Instead of having one class recite five times in one day, and perhaps once the next, they propose to so arrange the studies that every class shall have three recitations each day. That's business.

In order to gain a first class grade in the University Collegiate department one must average throughout the course, over 90. For the past term but three students of those examined have attained this standing, viz: John H. Long, Sophomore, and Misses Warren and Williams of the Freshman class. Down grade grades are too common.

PERSONAL.—Professor Smith is now in Philadelphia, boarding with the Rev. D. O. Kellogg. His disease is an exceedingly painful one, and it may be several years before he will be restored to the University. The Professor certainly has the sympathies of the students in his sufferings, and their earnest hopes for his speedy recovery.

MISS FRANCES SCHLEGEL, Professor of Modern Languages, has organized a French and a German society for the benefit of students in her department. Nearly all engaged in the study of these languages have joined them, and they will doubtless prove of great help in conversation. The societies meet alternately with each other on Wednesdays.

There will be a lively contest this year between the members of the Freshman class, for the prizes offered by Prof. Snow for the best collections in insects. The first prize consists of "Packard's Guide to the Study of Insects," and the second of one thousand insect pins. Several of the members made quite large collections during last summer, and took considerable pains in mounting their specimens.

DONATIONS.—F. H. Morgan donated to the University last week 200 fine specimens of Coleoptera. J. W. Ball also donated some rare Coleoptera which he had collected in Western Kansas. Within less than a year the number of beetles in the cabinets has been more than doubled by donations from the students. The total number of Coleoptera now in the University is 4,700, comprising 750 species.

☞ Last spring some of the students used a novel method in catching moths. Having reared the female, or captured it alive, they placed it in a box covered with mosquito bar, in some room with the windows open. The male then attracted by the female would fly into the room and being unable to find its way out could be easily captured. One student captured in this way four beautiful Cecropia moths in one night, and another captured an abundance of maple worm moths and several Luna moths.

"ORDER No. 11," the last drama brought out in this city, by Mr. J. A. McKnight, was sustained in character mostly by students, and their efforts seem to have met the very general approval of the public. Mr. F. P. Clark furnished the afterpiece of "Othello Outdone," and it constituted a very enjoyable feature of the entertainment.

☞ Prof. Knox of Baker University and his enthusiastic students have succeeded in capturing some very rare birds, but none new to the Kansas list. Two birds that they have captured, Lincoln's Finch (*Melospiza Lincolni*) Cooper's Hawk (*Accipiter Cooperi*) have never yet been taken at Lawrence. Before long we hope to chronicle the capture of some new Kansas bird by them.

Doubtless the common mind has it that the local department of a scientific publication is a necessary evil, and that the *Observer of Nature*, with its limited capacity, would be much more acceptable without it. We wish our readers to bear in mind, however, that this column is devoted to observations on *human* nature, in its various phases, and that all items of interest concerning *genus homo* will be thankfully received and duly recorded.

☞ An agency has been established at Philadelphia under the management of J. H. Ridings, for the sale of specimens of insects. This will prove very beneficial to any person making a collection in any particular family, and wishing specimens to complete a series in his cabinet. The prices range from three to fifty cents per specimen for beetles, and from ten to fifty cents each for butterflies. Estimating the value of specimens at these prices, a very small cabinet would be worth a good deal.

OROPHILIAN.—The Orophilian session of Friday last, though slightly interrupted by the musical efforts of a visitor, was a success. J. W. Ball gave an interesting history of St. Valentine's day. This gentleman having been favored with some heart-melting verses and big "yaller pictures," as we suppose, was able to throw long draughts of love and sentiment into his piece.

The debate upon the question, "*Resolved*, That ancient times presents a better field for eloquence than modern times," was the most interesting feature of the evening. The regular debaters being all present, the question was handled with considerable energy. Prof. English held the attention of the society for a time to some prominent points on the question. The irregular debate was general and excellent.

Trains leave	P. M.	A. M.	P. M.	
Terminus,	12 20			
Santaquin,	12 57			
Payson,	1 17			
Spanish Fork,	1 49			1 00
Springville,	2 05			1 25
Provo	2 25			1 50
Pleasant Grove	3 08			2 00
American Fork	3 20			2 10
Lehi	3 32			2 25
Draper	4 22			2 75
Arrive at Sandy,	4 37			
Leave Sandy	4 47	9 30	5 00	3 00
Junction	4 51	9 40	5 10	3 25
Little Cottonw'd	5 11	10 15	5 40	3 50
Arrive at Salt Lake	5 40	11 00	6 15	4 00

Nos. 1 and 2 will be run daily.

Nos. 3, 4, 5 and 6 will be run daily, Sundays excepted.

☞ For all information concerning Freight or Passage, apply to

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UTAH CENTRAL RAILROAD.

Pioneer Line of Utah.

ON AND AFTER JANUARY 1ST, 1874,

Daily Trains

Name of Station.	*No. 1. Pass'r.*	*No. 3. Pass'r.*	*Fare.*
Trains leave Salt Lake.	8 30 AM	3 40 PM	
Woods Cross.	8 36 "	4 08 "	.30
Centreville	8 33 "	4 18 "	.75
Farmington.	8 50 "	4 33 "	1.00
Kaysville.	7 07 "	4 52 "	1.35
Arrive at Ogden.	7 50 "	5 40 "	2.00

	No. 2. Pass'r.	*No. 4. Pass'r.*	
Trains leave Ogden	8 40 AM	6 20 PM	
Kaysville,	9 31 "	7 10 "	1.00
Farmington	9 52 "	7 31 "	1.35
Centreville	10 04 "	7 44 "	1.60
Woods Cross.	10 13 "	53 "	1.75
Arrive at Salt Lake.	10 40 "	8 20 "	2.00

MIXED TRAINS

WILL RUN DAILY, Sundays Excepted.

Leaving Salt Lake City at 8.30 a.m. and and Ogden at 3.30 p.m.

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JAMES SHARP,
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dll-ly

UTAH WESTERN RAILWAY.

ON AND AFTER MAY 1st, 1875, and until further notice, the

Utah Western Railway Co

Will run daily trains for passengers and freight, between

Salt Lake City and Halfway House

Leave Salt Lake City at 7:00 a.m.
Stopping for breakfast at Clinton's, and
Arrive at Half-way House at 9:20 a.m.
Leave Half-way House at 11 00 p.m.
Arrive at Salt Lake City at 1:00 p.m.

The stages of the Western Stage Co. connect with trains at Half-way House for Tooele, Stockton, Ophir and Dry Canyon, and street cars at Salt Lake City.

Passengers will please purchase their tickets at the offices.

☞ All freight for the West must be at the U.C. Depot not later than 5 o'clock p.m.

H. P. KIMBALL, Supt.

Salt Lake City, April 26th, 1875. d16

UTAH NORTHERN RAILROAD.

On and after May 10th, 1875,

NORTHWARD.

Trains leave	*No. 1 Passenger.*	*No. 3 Freight.*
Ogden	5:45 A.M.	6:45 P.M.
Corinne	7:50 "	
Logan	10:15 "	ARRIVE
ARRIVE AT		1:45 A.M.
Franklin	11:30 "	

SOUTHWARD.

Trains leave	*No. 2 Passenger.*	*No. 4 Freight.*
Franklin	12:45 P.M.	
Logan	2:00 "	9:00 P.M.
Corinne	4:20 "	1:35 A.M.
ARRIVE AT		
Ogden	6:15 "	5:00 "

N.B.—Nos. 1 and 2 will run daily. Nos. 3 and 4 will run between Ogden and Logan as follows: No. 3 will run northward every Tuesday, Thursday and Saturday nights. No. 4 will run southward every Monday, Wednesday and Friday nights.

Gilmer & Salisbury's Stage Line to and from Montana connect with trains at Franklin.

M. THATCHER, Supt.

CHAS. NIBLEY,
Gen. Freight & Ticket Agt. d141

THE CHICAGO, ROCK ISLAND

909B/361 AND 16

Grasshoppers and Locusts.

George M. Dawson, Geologist and Naturalist, North American Boundary Commission, McGill College, Montreal, is accumulating information, that some knowledge of practical importance, if not scientific interest, may result concerning the devastating grasshopper or locust. He has communicated with the Deseret Agricultural and Manufacturing Society on the subject, his questions being given below, and also the answers by the Society named, which will probably be interesting to many of our readers, as historical matter of the Territory, if not otherwise—

1. Has the devastating Grasshopper appeared in your section of country?

2. Were the insects produced from eggs in the country itself? If so, please state:

(*a.*) Date of hatching out.

(*b.*) Time during which they remained and date of their departure.

(*c.*) Direction of their flight on departure.

3. Were swarms of locusts observed to arrive on the wing, or to pass overhead without alighting? If so, state which, and:—

(*a.*) Date when swarms first seen.

(*b.*) Direction from which they arrived.

(*c.*) Length of time during which they remained on the ground or continued passing over the place.

(*d.*) Date of their departure.

(*e.*) Direction of their flight on departure.

4. What proportion of the crops do you believe to have been destroyed?

5. Were Grasshoppers observed to deposit eggs in the district this Autumn? If so, please state whether any were hatched and the young insects destroyed by the frost.

1. Yes, in the year 1855, and again from 1866 to 1872 *inclusive*.

2. In 1855 came from the West. In 1866 came from the North. Subsequent years' product produced from eggs, while relays came from all directions.

(*a.*) April to June.

(*b.*) 1855, left in August and September; 1872, ditto.

(*c.*) North and East.

3. Both in dense clouds obstructing the sunlight.

(*a.*) 1855, came about July. 1866, came about September and deposited eggs.

(*b.*) See No. 2.

(*c.*) About six weeks.

(*d.*) See No. 2 b.

(*e.*) See No. 2 c.

4. 1855 about seventy-five per cent of the cereals, vegetables and fruits were destroyed by them. The following Spring the people subsisted largely on thistle, milkweed and other roots.

5. No, Sir. When eggs are not disturbed by the plow, frost does not destroy them. During the years named, they visited all parts of the Territory. Thousands of bushels were destroyed by the organized labors of the people, by driving them, and burying them in trenches, by setting traps in irrigating ditches, by covering the ground with straw, under which they would shelter for the night, and in the morning burning the straw and insects. Men, women and children, with the village poultry, in some places, moved to the fields in wagons and fought the common enemy from hatching to flying time. In some parts, it was estimated there were one hundred bushels of hoppers to the acre.

A notable local mathematician estimated that in *one season, one and a half million bushels* were destroyed by lighting in Great Salt Lake and drifting on the shores, forming an immense belt.

During all our locust and cricket visitations, we have not received *one dollar* appropriation or donation from the General Government, or from neighboring States or Territories. Respectfully, etc.,

W. WOODRUFF,
President of the Deseret Agricultural and Manufacturing Society.

A. M. MUSSER,
Director and Sec'y pro tem.

GRASSHOPPERS.—During the past two weeks, millions of young grasshoppers (*Caloptenus spretus*) have hatched. Up to April 28 (and probably later) unhatched eggs could be dug from the ground. As yet they have done but little damage to crops. It is reported by farmers and others that they are hatching in sufficient numbers to eat down all the young corn as fast as it comes through the ground and probably prevent the wheat from maturing.

They seem to hatch only in particular localities, and in these places they are sometimes so thick as to blacken the ground. While south of the University the other day, we succeeded by one sweep of the hand, in capturing 190 grasshoppers by actual count. At present they are quite small, so as to pass unobserved to most people. They range from a quarter to three-eighths of an inch in length. When it is remembered that these insects must stay with us until they get their wings, which will not be before the middle or last of June, it will be seen that a comparatively small number can do considerable damage to vegetation.

Observer Publishing Co. Lawrence Kansas May 5, 78

3. *Crotalophorus Kirtlandi*, Black Rattlesnake.
4. *Ancestrodon contortrix*, Copperhead.
5. *Eutainia saurita*, Water Garter Snake.
6. *Eutainia sirtalis*, Garter Snake.
7. *Nerodia sirpedon*, Water Snake.
8. *Regina rigida*, Yellow-bellied Snake.
9. *Regina rigida*, Water Snake.
10. *Heterodon platyrhinos*, Blowing Viper.
11. *Heterodon niger*, Black Viper.
12. *Pituophis melanaleucus*, Bull Snake.
13. *Scotophis vulpinus*, Racer.
14. *Ophibolus guttulus*, Thunder Snake.
15. *Ophibolus eximius*, Milk Snake.
16. *Bascanion constrictor*, Common Black Snake.
17. *Chlorasonia vernalis*, Green or Grass Snake.
18. *Celuta amoena*, Red or Ground Snake.

We send thanks for the following valuable publications received:

The Report of the Entomological Society of London, Ontario.

The Report of the United States Commissioner on Fish and Fisheries.

The "Natural History of portions of Colorado and Montana," by J. A. Allen.

"The Metamorphism produced by the Burning of Lignite Beds," by J. A. Allen.

EXCHANGES.—The following exchanges have been received: *Canadian Entomologist*, *Earlhamite*, *Deaf-Mute Index*, *Psyche* and the *Young Sportsman*.

Minneapolis Tribune · June 22, 75.

WORK OF THE LOCUSTS.

The Present Condition of Things in the Counties Infested—Wholesale Destruction of Crops in Nicollet County, Which Seems to Have Been the Center of the Depositing Area—Still Hatching in the Low Grounds.

As the season advances, the probabilities of wholesale devastation by the locust swarms become stronger each day, and even the most vigorous and determined resistance to their encroachment on the part of the farmers and citizens of different localities, has not sufficed to prevent the work of destruction which the "insect plague" prosecutes with unabated zeal both night and day. While the bounty system has undoubtedly prevented millions upon millions of the voracious tribe from laying waste large areas in this State or elsewhere, it cannot be denied that even in some sections which have given it the most thorough and prolonged trials, the locusts are still to be found in ominous numbers, and with a power of appetite which naturally causes gloomy forebodings in regard to the future of some of the fairest and most productive portions of the State. So far as could be ascertained by the writer from inquiries made during a recent visit to St. Peter, only a comparatively small portion of Blue Earth and Le Sueur counties is now being devastated, while the damage inflicted in Brown county is inconsiderable when compared with the fearful havoc of locusts in Nicollet county and portions of Sibley. While the farmers of the counties first named will have a depressing record of losses to keep in 1875, certain districts in Renville county, nearly all of Nicollet and the major portion of Sibley county, will point to a devastation entirely beyond the imagination or estimates of those who have not visited the blighted fields in person. Even now, when the destroying capacity of the locust is not fully developed, it is asserted by gentleman who are in a position to form accurate judgment, that fully two-thirds of the entire crop of Nicollet county has been destroyed, and the result of the overwhelming visitation in Sibley county is fully as disastrous. Notwithstanding this tremendous reverse which has overtaken the latter sections, the farmers continue to exhibit a heroic determination to fight out the battle as it has begun and keep up the work of destroying the million-armed enemy which is devouring their substance and leaving their fields in blight and naked. It is easy to say "they are catching hoppers by the hundreds of bushels per day," but one who is not personally familiar with the situation of affairs in an important division of the Minnesota Valley, cannot appreciate the fearful odds against which the people are struggling with their hands and means. This may be in part revealed by the suggestive statement that while many of the locusts are donning their wings preparatory to flight, the cocoons are still sending up additional millions to the surface in the low grounds of the counties mentioned, and that notwithstanding the immense slaughter of locusts inaugurated under the bounty system, signs of their presence may be observed where the most effective and successful work has been done.

In pleasant contrast with the picture which is not overdrawn in the above and brief sketch, remains the fact that outside the limited tract of territory above designated, the prospects for an abundant and teeming harvest were never better since the first settlement of the State. The luxuriant growth of all vegetation is almost tropical in its character and the labor of the industrious husbandman has never been performed under more auspicious circumstances, or with better assurances of an ample and deserved reward. While the locusts in the infested regions are stripping the cultivated fields and severing the growing fruit from trees and bushes, a seemingly providential interposition will leave the State with a sufficiency for the needs of all its inhabitants, provided the devastating myriads take wing for their native deserts, as is now anticipated. Enough have already been destroyed in the counties of Blue Earth, Le Sueur, Nicollet and Sibley, to cover the entire tract an inch deep with locusts had they been permitted to grow undisturbed, or to sweep away in one week every vestige of the cereal crop of the State. The bounty plan, while it may not succeed in saving the crops of the counties adopting it, has at least swept from existence many divisions of an army as numerous as the sands on the sea shore, and with a power for injury which surpasses human belief or comprehension. Its principal utility will be the protection of other portions of the State now free from the ravages of an indescribable plague, and limiting the area in which its terrible havoc is only too perceptible even at the present hour and day.

PH.

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COMMISSION MERCHANT

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20 Chamber of Commerce, Chicago.

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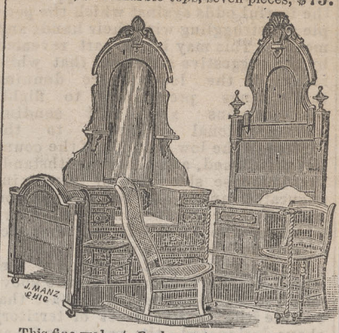

This fine walnut Parlor Suite, covered in Hair cloth or wool Terry, any color, 7 pieces, **$68.**

Either of the above Suites shipped to any part of the world on receipt of price. All other conceiv able descriptions of Furniture at *equally low prices.*

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IODIDE OF AMMONIA

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"GILES' IODIDE OF AMMONIA, is in my judg ment the best remedy for Neuralgia ever put be fore the public. I have been afflicted with this terrible disease for 32 years, and never until I fell upon Mr. Giles' remedy, did I find any assured relief. I take pleasure in saying this, inasmuch as I desire always to be a benefactor of the human family. WM. P. CORBIT,
Ch'n of the Methodist Church Extension.

Sold by all Druggists. Depot 451 Sixth Ave., N. Y. Only 50 cents and $1 a bottle. jy18-daw

---

IRON WORKS

much needed.

THE PROBABLE DAMAGE THE GRASSHOPPERS WILL DO THIS YEAR.

Last week we made the remark that there were hopeful signs regarding the damage that would be done by the grasshoppers this year, on account of failure to propagate themselves in a climate not adapted to their condition.

The section of Minnesota last year devastated by them were the counties of Rock, Nobles, Jackson, Martin, Faribault, Watonwan, Cottonwood, Murray, Pipestone, Lyon, and the west part of Redwood. This year it is much smaller, being Blue Earth, Brown, Nicollet, part of Le Sueur, Sibley, Renville, McLeod, and small fractions of counties lying to the north of these. Thus it will be seen that the area they cover this year is considerably smaller than it was last.

Gen. Johnson, of St. Paul, one of the commissioners for the distribution of seed wheat, takes a very hopeful view of the case. In his travels in the grasshopper country, he conversed freely and fully with the farmers, and found on all sides a hopeful feeling, and determination to sow and plant. Nearly all the parties who abandoned their claims last year after the grasshoppers came, have returned. From present appearances, indications are that at points where they have laid their eggs they will not be as numerous this year as last, and this will probably be the end of them in Minnesota.

In confirmation of this opinion, we print below a letter from Prof. C. V. Riley, the State Entomologist of Missouri, who, of all others, ought to know the habits of these pests. It is addressed to the *Rural World*, and is as follows:

"I state it as my belief that there is

Farmer's Union
Minneapolis Minn.
Aug 8-73

Arkansas was so called in 1819, from its principal river.

Michigan was so called in 1785, from the lake on its borders.

Louisiana was so called in honor of Louis XIV. of France.

Youths' Department.

IDLE WAVES, Stearns Co., Minn., March 25th, 1865.

To the Editor of the Union:

We take your paper. I think it is very interesting to read. It has been very cold here this winter; about every one's cellar has frozen, ours included. There has been a great deal of sickness near here; in one family, in which there were eleven children, six died of diptheria. I hope that I will not displease "N. P. O." when I close. My brother and I have been very much interested in reading "Lee's Surrender," by Volunteer. Can any one, through the UNION, give me a receipt for making raspberry vinegar?

WINNIE CASTLE.

OREGON, Wis., April 26, 1875.

To the Editor of the Union:

As other little girls are writing to the UNION, I thought I would write a few lines, too. I like to read the young folks' letters. I have four brothers and two sisters. One brother is working out by the month. We have had a very cold winter. The snow was deep and drifted badly. I have knit six pairs of stockings this last fall and winter, helped to tend baby sister. I went to school last year. I pieced a quilt in two weeks, and took it to the fair at Madison. I am going to piece two more this summer to take to the fair. I will be ten years old next month, and am small of my age.

J. MIRA BALDWIN.

BLOOMING PRAIRIE, Minn., March 15, 1875.

To the Editor of the Union:

According to promise, I will tell the UNION boys how the months derived their names:

January derived its name from a Roman deity, or god, called Janus. He was represented with two faces looking opposite ways, and holding a key in one hand and a staff in the other. He presided over the commencement of all undertakings. Thus, Numa had January commence the year. The temple of Janus at Rome was kept open in time of war and shut in peace. This temple was shut but six times in 800 years.

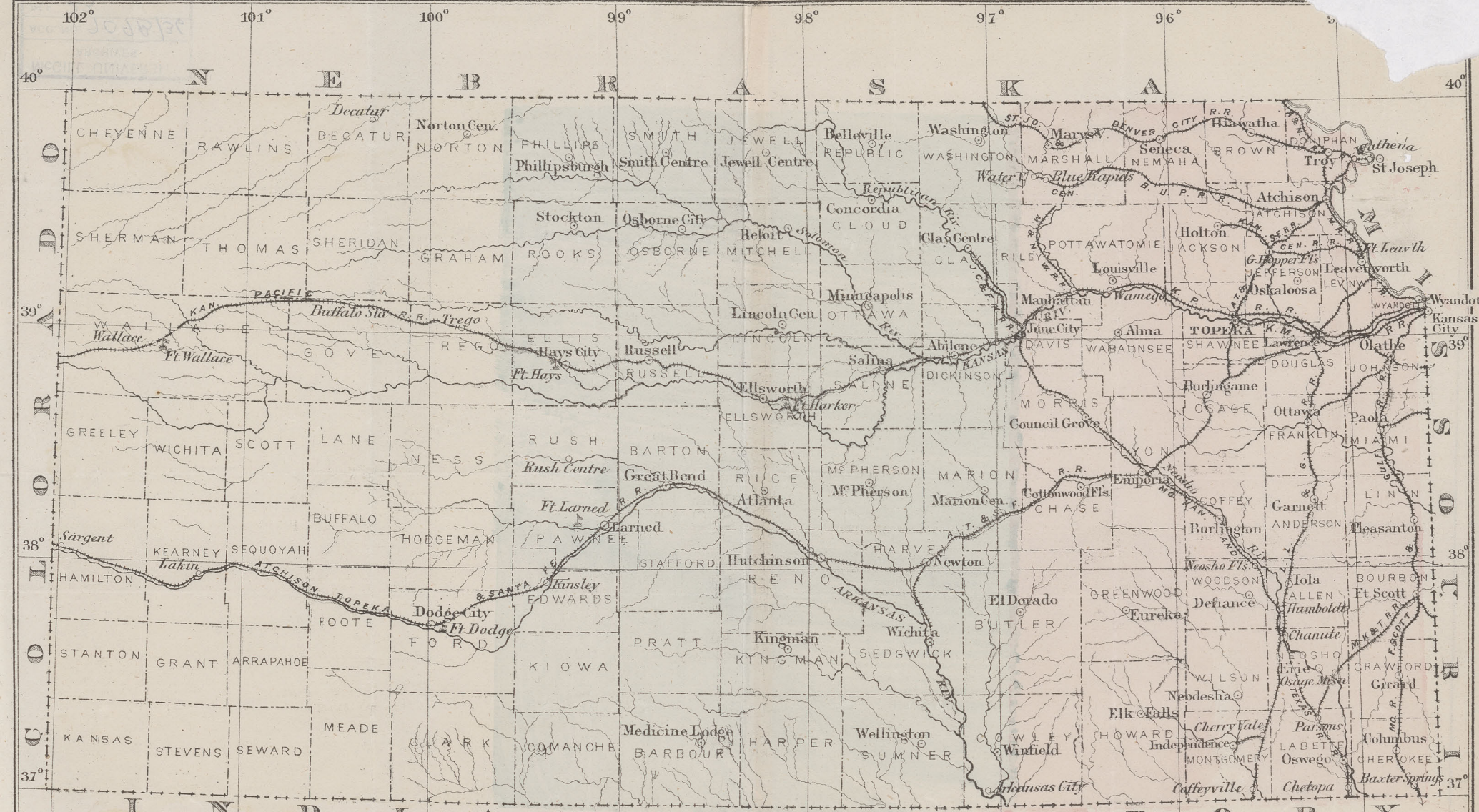
February, taken from the Latin word (which means I purify.) In this

little danger of a second invasion, in 1875; that those which hatch this spring will gradually dwindle away, and become intestate until there will be scarcely a trace of them left in 1876; and that there is no danger, whatever, of their overrunning the State to the East.

Setting aside possible, but not probable, injury from a new invasion, we may consider the probable injury that will result in 1875 from the progeny of those which came in 1874. The eggs which are deposited on southerly hillsides often hatch before cold weather sets in, if the fall is warm and protracted, while many hatch soon after the frost is out of the ground in spring. Yet the great bulk of them will not hatch till into April. That most of the eggs will hatch may be taken for granted unless we have very abnormal climatic conditions, and unprecedentedly wet and cold weather following a mild and thawing spell. The young issuing from these eggs will also, in all probability, do much damage, as they did in the spring and summer of 1867. But the actual damage cannot be foretold, as so much depends on circumstances. In 1867 in many counties of Kansas and Missouri, where the ground had been filled with eggs the previous fall, little harm was done in the spring—so small a percentage of the eggs came to anything and so unmercifully were the young destroyed by natural enemies. A severe frost kills the young after they have hatched, where a moderate frost does not affect them. In Missouri, if we have no weather that proves fatal to either eggs or young, considerable damage may be expected, but not as much as in the country to the west; for, as already stated, we received the more scattering remains of the vast army, and the eggs are neither as numerous, nor will they hatch as early in our territory as farther west. Following a rather mild February the March of '67 was a very severe one, the thermometer frequently indicating 18 degrees below zero, and, according to Mr. W. F. Goble, of Pleasant Ridge, Kan., who wrote an excellent account of the insect, * this severe weather caused many of the eggs to perish; and he expresses the opinion that "judging from the voraciousness of those that did appear, I doubt not Kansas would have been made a perfect desert if all had lived.

C. V. RILEY.

*Monthly Reports, Dept, Agr. 1867, p. 287.



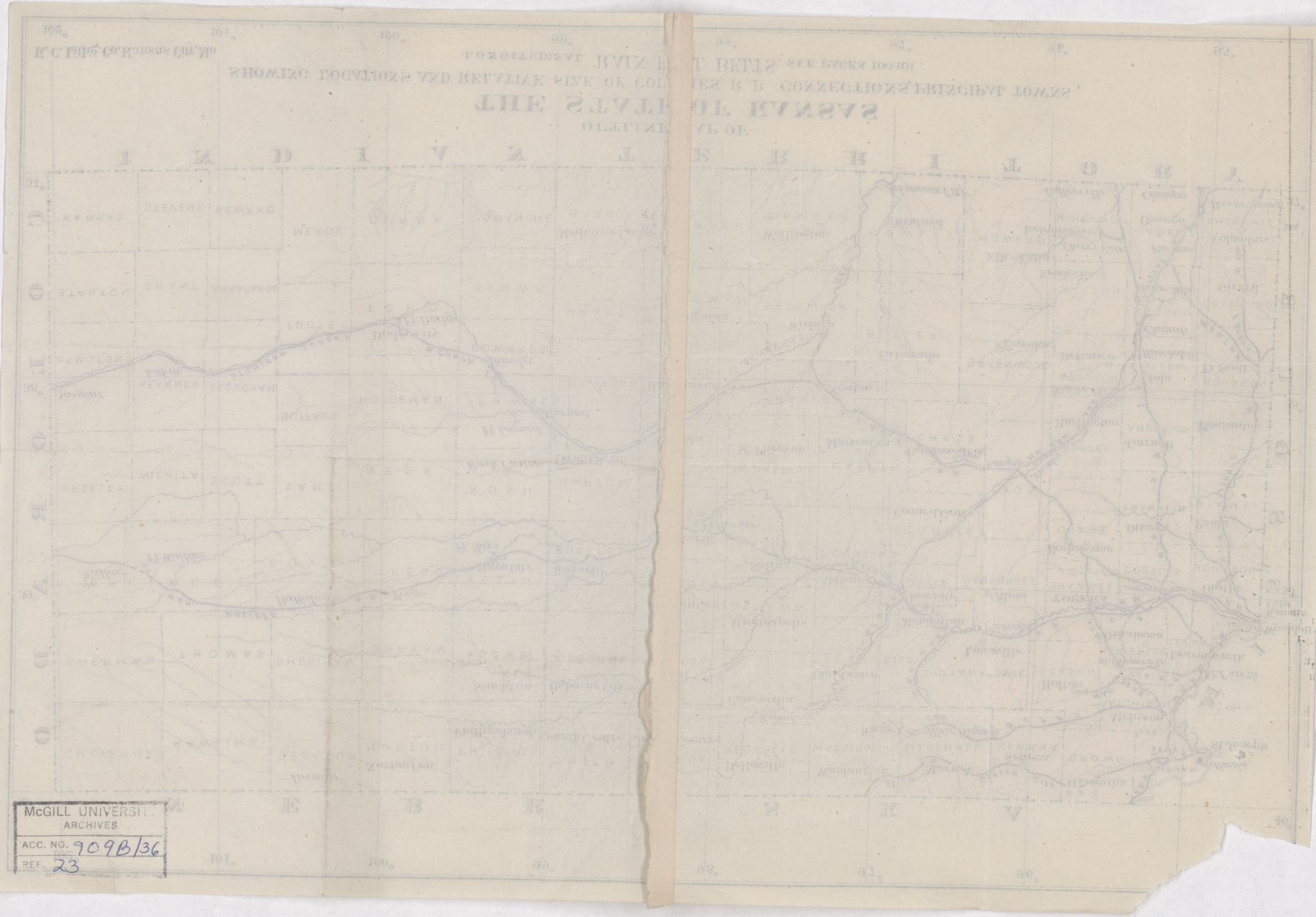
OUTLINE MAP OF

THE STATE OF KANSAS

SHOWING LOCATIONS AND RELATIVE SIZE OF COUNTIES, R.R. CONNECTIONS, PRINCIPAL TOWNS,

LONGITUDINAL RAIN FALL BELTS. SEE PAGES 100-101.

K.C. Lithg. Co. Kansas City, Mo.



RICE'S
Township and Rail Road Map
OF
MINNESOTA
1874.
Lithographed and published by
G. JAY RICE, ST. PAUL.
Scale 24 Miles to one Inch.
Minnesota contains 83,531 Square Miles.
BRITISH POSSESSIONS
DAKOTA
IOWA
WISCONSIN
LAKE OF THE WOODS
Rainy Lake
Lake Superior
RED LAKE
LEECH LAKE
MILLE LACS
Red Lake Indian Reservation
CHIPPEWA INDIAN RESERVATION
PEMBINA
POLK
BELTRAMI
ITASCA
ST. LOUIS
LAKE
CLAY
BECKER
CASS
WADENA
AITKEN
CARLTON
WILKEN
OTTER TAIL
CROW WING
PINE
TODD
MORRISON
KANABEC
TRAVERSE
GRANT
DOUGLAS
STEVENS
POPE
STEARNS
BENTON
MILLE LAC
SHERBURNE
ISANTI
CHISAGO
ANOKA
BIG STONE
SWIFT
KANDIYOHI
MEEKER
WRIGHT
HENNEPIN
RAMSEY
WASHINGTON
LAC QUI PARLE
CHIPPEWA
RENVILLE
McLEOD
CARVER
SCOTT
DAKOTA
YELLOW MEDICINE
SIBLEY
LE SUEUR
RICE
GOODHUE
WABASHA
LINCOLN
LYON
REDWOOD
NICOLLET
BROWN
PIPESTONE
MURRAY
COTTONWOOD
WATONWAN
BLUE EARTH
WASECA
STEELE
DODGE
OLMSTED
WINONA
ROCK
NOBLES
JACKSON
MARTIN
FARIBAULT
FREEBORN
MOWER
FILLMORE
HOUSTON
State Boundary between Minnesota and Wisconsin
State Boundary between Minnesota, Wisconsin and Michigan
The Diagram above shows the Manner of Numbering the Sections in a Township. A Section contains 640 Acres.
Par. of Lat. 43° 30.
VICINITY OF ST. PAUL, AND MINNEAPOLIS.
HENNEPIN COUNTY
RAMSEY COUNTY
DACOTA CO.
WEST MINNEAPOLIS
EAST MINN.
ST. PAUL.
MENDOTA
Fort Snelling
References.
State Capitol.
Incorporated Cities.
County Seats.
U.S.L.O. United States Land Offices.
Villages.
Finished Rail Roads.
Proposed Rail Roads.
County Lines.
Entered according to the act of Congress in the year 1874 by G. Jay Rice in the Office of the Librarian of Congress at Washington.

Map of vicinity of St Paul & Minneapolis

N.G. for Biography

—A despatch from St. Paul, Minn., respecting the grasshopper plague, states :—The plan very generally adopted in the grasshopper infested districtsof the State, of paying bounties for captured 'hoppers, is working admirably. The plan orignated in Le Sueur County, where it has been in operation for nearly a week; the result being that the county is being rapidly cleared of the pests. Other counties soon joined in, and a regular war of extermination is now in progress in Sibley, Nicollet, Blue Earth and Brown counties, the section of country where the 'hoppers have appeared in by far the greatest numbers this season. In Blue Earth county alone the captures Saturday and Monday rcacheed 2,000 bushels, aggregating 600,000,000 'hoppers. In some localities the pests have commenced flying northward, and altogether, the prospect is cheerful that Minnesota will not suffer severely this seasen from this cause.

on hand a large assortment of

, **Hall Lights, Pendants Brackets, &c.,** 909B/30/18

ASS, BRONZE AND GLASS,

, American and Canadian Manufacture,

Will be Sold at Low Prices.

equiring Gas Fittings would do well examine our stock. 107

CAN'T DO IT.

Gov. Davis Explains That He is Prohibited From Giving Certain Moneys for "Deceased Hoppers," In Reply to the Committee from the Chamber of Commerce.

The following letter from Gov. Davis fully explains all the points that we might introduce as prefatory remarks:

STATE OF MINNESOTA,
EXECUTIVE DEPARTMENT,
ST. PAUL, June 21, 1875.

Messrs. H. H. Sibley, Horace Austin, Hiram Rogers and C. W. Hackett:

In pursuance of my promise made to you this morning when you called upon me as a committee from the St. Paul Chamber of Commerce, I have the honor to state that I have considered the request contained in the letter of Messrs. Wiswell, Wise and Baker of Mankato, which, as I understand, the Chamber desires me to comply with unless such compliance is barred by insuperable legal objections.

It is desired, in substance, that the Governor apply five thousand dollars of the unexpended balance of the appropriation hereafter mentioned, as a bounty to grasshoppers to be caught and destroyed in the counties of Brown, Blue Earth, Nicollet, Le Sueur and Sibley, these being the only counties in the State which are at present afflicted by these pests.

The appropriations in question were granted by act of the Legislature, approved March 5, 1875.

I am compelled to state, after a careful examination of this act, that I cannot grant the relief requested except by a palpable violation of the letter and spirit of the law. The act appropriates $75,000, "for the relief of the destitute settlers in those counties devasted by grasshoppers in the summer of eighteen hundred and seventy-five, for the purchase of seed grain."

It is to be noted—

First. That only those settlers in the counties which were devastated in 1874 are entitled to this relief; and

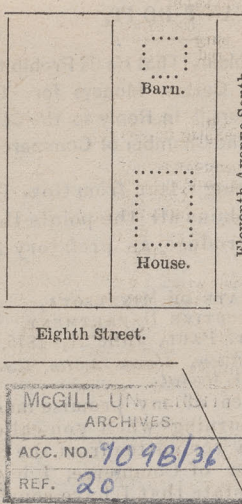
Second. That such relief is to be by furnishing seed grain.

This act, it is true, contains a proviso that $25,000 of this appropriation may be extended for immediate relief to sufferers from grasshoppers or hail storms. This proviso, however, has reference to those who have suffered, not to those who may suffer in the future. This construction is the only one which the terms of the act bear to my mind. It is well known that such a state of facts as that now presented were not forseen or considered by the Legislature. My duty s to carry out and not to exceed the iintentions expressed in the statute. This obligation not to exceed that intention is just as obligatory as the duty to carry it out.

It is fit that I should add that I have reached this conclusion in the warmest sympathy for the people of those counties. They deserve all encouragement which can legally be extended to them in the work which they are performing. The recommendations of a body so influential and prudent as the Chamber of Commerce is one entitled to great weight, and I regret that the clearest convictions of my duty forbid me from compliance with its request in the present matter.

Yours truly,

C. K. DAVIS, Governor.



We offer for sale the residence of Rev Horace Bumstead, located as above, and handsomely furnished throughout. House of nine rooms besides bath room, china closet, pantry, frost-proof cellar; chambers have large closets with drawers and shelves. Five, old-fashioned, open fireplaces, with brass andirons. Lower story finished in hard wood. Storm sash and mosquito bars for nearly all the windows. 150 barrel cistern. Lawson furnace and plumbing, with hot and cold water. Thorough ventilatien. Barn with two stalls, bran and oat bins and drive well. House and barn thoroughly built for owner's use. Choice location on sunny corner looking out Lincoln avenue. Price, with furniture and two quarter-acre lots of land, $13,000. A bargain.

☞ Lot "Z," Johnson's Addition, with a 2-story
95 frame house of 10 rooms, cellar, well and cistern; this lot contains 3½ acres, and has a frontage of 265 feet on Nicollet avenue; a large quantity of fruit raised on the place. This is a beautiful property and overlooks the whole city. Price $10,000. Terms to suit purchaser. Part of the money can lie on the property at 7 per cent.

☞ **The Lindley Property, opposite R.**
8 **J. Mendenhall's Residence.** Has a front on Nicollet avenue of 330 feet, and is 330 feet in depth, making an entire block of ten (10) ¼-acre lots. Has a good residence, with eleven rooms, beside pantry and large closets, and a good cellar, well and cistern. Also, good barn, with cistern in barn. Abundance of fruit and ornamental trees and shrubbery. Sidewalks laid, &c., &c., and everything about the place in first-rate order.

Will sell the above property for.....$15,000
Or four lots with the buildings for..... 8,000
Or six vacant lots for..... 7,500
Or will exchange for a property nearer business, of less value.

☞ **Laurel Avenue Property**, lot 50 by
10 150, with a 1½-story house of 7 rooms, closets, pantry, cellar, well, cistern and barn, and all in good shape; price $3,400.

☞ We have a good residence on **Riverside**
76 **Avenue**, which we would like to **exchange** for a residence or vacant lots on the **East Side**, near the University; price $3,500.

☞ We have a nice residence for sale on **Nicol-**
501 **let Island.**

☞ **Property Near the New High**
1052 **School**—2-story house, six rooms, good cellar, well, cistern and barn, all in **good** order, will be sold at a **bargain.**

☞ House and lot on 7th street, (first below
490 Judge Vanderburgh's); lot lies about three feet above the grade; sidewalk laid in front of lot; house has nine rooms besides pantry, hall, four closets, good cellar, well and cistern; lot 55x165; price $6,500. Terms—$500 to $1,000 cash, seven per cent. mortgage of $2,000 running five years, balance in monthly, quarterly or yearly payments, interest at 10 per cent.

☞ Seventh Street Property—Lot 55 by 170, be-
2301 tween 1st and 2d avenues north, with a two-story house with ells, 7 rooms, closets, pantry, storerooms, woodshed, barn, two cisterns, &c.; price, $5,300—$1,000 cash, mortgage of $1,800 on or before eight years, at 10 per cent. Balance to suit purchaser, at 10 per cent.

☞ Lot 3, block 3, Grimshaw's addition, with
1651 1½-story frame dwelling, seven rooms, besides pantry, closets, good well, cistern, cellar and barn; lot 53 by 129 to alley; price $2,600—$1,600 cash, balance on time at 12 per cent.

☞ Residence on Hawthorne Avenue, (Wil-
8 son, Bell & Wagner addition) house of 8 rooms, cellar, cistern, &c, (all new.) Two lots, (one a corner) 50x150, price $6,000, or house and one lot $4,500—$500 cash, $1,000 in six months, balance, three or five years at 10 per cent. interest; or will sell for $1,000 in cash, balance in monthly installments of $50.

☞ Lot 5, block 201, Minneapolis proper, with
173 a 1-story house, well built, with 4 rooms, cellar, well and barn, (corner lot); price $1,500—$1,000 cash, balance one year at 10 per cent.

THE WAR ON THE LOCUSTS.

A Delegation from the Smitten Country Interview Our Citizens—A Meeting Held and Action Taken—The Legislature to Reimburse the Counties If It Will—Thousands of Bushels Caught, and Thousands More if the Bounty is Kept Up—A V[illegible] to Minneapolis.

Yesterday at noon, in the rooms of the Chamber of Commerce, an important meeting was held in the interest of the grasshopper sufferers. Telegrams had been received in advance, announcing the arrival at 11:30 of the following gentlemen from points along the line of the St. Paul & Sioux City Railroad:

Mankato—Capt. Clark Kayser and [illegible]. C. Brest.

LeSueur—Senator Doran, J. J. Green and E. R. Smith.

St. Peter—Maj. A. L. Sackett.

Ottowa—Thomas Raney.

A committee of the Chamber of Commerce met the delegation at the above hour, and the meeting was called to order by Gen. R. W. Johnson.

OBJECT OF THE VISIT AND MEETING.

J. J. Green, Esq., editor of The Le Sueur Sentinel, explained the objects of the delegation in visiting St. Paul at the present time, giving interesting particulars in regard to the measures of protection against the ravages of the locusts, the effects of former raids and the gratuities upon the communities affected.

A series of resolutions passed at a public meeting in Mankato on the 10th instant were read by Secretary Johnston, the resolutions being mainly an appeal to the Chambers of Commerce of St. Paul and Minneapolis for assistance in devising measures to prevent further destruction by locusts, and encourage the people to persist in their resistance.

Mr. Green expressed a conviction that the

CATCHING PROCESS

had saved the crops in many localities. Nearly 1,000 bushels have thus far been caught in Le Sueur county; 6,000 bushels in Blue Earth county at a bounty cost of $13,000; many destroyed in Brown and Nicollet counties, but the number under the bounty plan not reported.

WHERE THE GREATEST DANGER.

Gen. Bishop referred to the fact that the greatest fear must be entertained by counties outside of the regular hatching fields and mentioned the events of last year, when the greatest devastation was caused in regions to which the locusts had flown after the wings had grown.

A QUERY AS TO THE PLAN.

Mr. Thompson said the main question was whether the plan was effective in preventing further damage. If the locusts were numerous as the shells on the sea shore, the fact was a matter beyond human control, but if on the other hand the measures diminished the numbers and saved the crops, every portion of the State should respond with its means and assistance.

SENATOR DORAN'S ANSWER.

Mr. Doran paid a high tribute to the energy and perseverance of Mr. Thos. Raney, of Ottawa, in urging his plans of catching and destroying the young locusts, and related the history of the movement in Le Sueur county. He mentioned former experiences with the locusts in 1864, when the people stood with folded hands and saw every vestige of their crops swept away. Mr. Doran urged the importance of present measures in order to prevent further destruction. At the conclusion of Mr. Doran's remarks, Gen. Sibley offered the following resolutions, which were unanimously adopted:

ACTION OF THE MEETING.

Resolved, That in the judgment of this meeting the grasshopper invasion in Blue Earth, Le Sueur, Nicollet and a few other co-terminus counties, is of a magnitude sufficient to make the extermination of these insects, if practicable, indispensable to the State at large, and the Chamber of Commerce in this city is hereby respectfully requested to give ample pledges to the counties where expenditures have been or may be incurred, for the destruction of grasshoppers, that the influence of the Chamber will be exercised to induce the Legislature of the State, at its next session, to refund such expenditures to the respective counties.

Resolved, That the sympathies of this meeting are with the people of the counties infested, and our best efforts are hereby promised to effect the object referred to in the first resolution.

INFORMATION ASKED FOR.

Mr. Sibley asked that the Chamber be furnished with accurate information in regard to the future success of the movement against the locusts, and was assured by members of the delegation that the dispatches thus far published in The Pioneer-Press, were based on official county records.

Mr. Green said that the principal object in the publication of the dispatches was to stimulate counties in the work of destruction, and the Chamber was authorized to forward copies of the resolutions to the authorities of Renville, Nicollet and Sibley counties.

Mayor Sackett, of St. Peter, and Capt. Kayser, of Mankato, spoke of the efforts at destruction in their respective counties, and Horace Thompson urged the importance of visiting the sections infested, for the purpose of assuring the people of future aid and immediate assistance and sympathy.

The delegation then withdrew to hold a consultation with Gov. Davis, and the meeting was declared adjourned, and the delegation proceeded to Minneapolis in the afternoon to meet the Board of Trade, after having been assured by Gov. Davis of his individual sympathy and hearty co-operation in any measure of protection which he can legitimately and [illegible] Chief Execu[illegible]

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During the rough weather last week, the steamer "Lady Head" lost two mud scows, belonging to the steam dredge "Cape Breton," which she had in tow.

FROM QUEBEC.

(Press Despatch.)

QUEBEC WEST.

QUEBEC, June 24.—John Hearn, the late member for Quebec West, has issued his address to the electors as king for their support in the approaching elections. In response to a challenge from his opponent, Mr. Henchey, he has expressed his willingness to meet him before the electors when and where he may desire.

RELICS.

Yesterday, while workmen were engaged in excavating in Mountain street, they discovered in an angular stone sink, about three feet below the surface, two large iron cannon balls.

FROM ST. JOHN'S, Q.

(Press Despatch.)

THE ANNIVERSARY OF ST. JEAN BAPTISTE.

ST. JOHN, Que., June 24.—The celebration to-day was on a more extensive scale than witnessed here for years, nearly every trade and profession being represented in the procession, which, headed by the St. John's brass band in their new uniforms, after marching through the principal streets, halted at the Market square, where patriotic addresses were made by Mr. Marchand, M.P.P., the presidents of the several societies, Messrs. Charland and Bernier, advocates, and others. St. Jean Baptiste, Jacques-Cartier, the Redman and the Farmer, were duly represented in the allegorical car. The printers, stonecutters, bricklayers, carpenters, joiners, sash and door manufacturers, boot and shoemakers, tinsmiths, painters, tailors, and other trades were represented by separate cars, with the occupants of each busy at work, that of the blacksmiths causing much merriment from its containing a horse, which they shod while in procession. From the display of meat in the butcher's car one could imagine they were prepared to carry into execution their motto, "We feed the world." The Messrs. Farrar's stoneware pottery was represented by their car at work coining out the pots and jars, followed by their sample waggon with a fine display of their rustic ware, a new branch just opened by them, and of which they are turning out probably the finest stock ever seen in Canada. The Bar was represented by His Honor Judge Chagnon, Major Futvoye, Q.C., and other members. The day is to conclude with a dramatic entertainment in the town hall, and a grand display of fireworks.

FROM PARKHILL.

(Press Despatch.)

THREE MEN SUFFOCATED IN A WELL.

PARKHILL, June 24.—A sad accident happened about one p.m. yesterday, in West Williams, County of Middlesex. Charles Hill was sinking a well on his farm and on reaching a depth of 30 ft., left for dinner. On his return he again descended, but on reaching depth of 14 ft., dropped from the bucket, overcome by the poisonous gas. The man at the windlass, named Gatt, alarmed a neighbor, Jno. Galbraith, who, on his arrival, descended to rescue Hill, but when he reached the same depth he also dropped. Gatt then ran for another neighbor, who also went down to help the others, but the same fate awaited him also. They now sent for Jos. Ecoles, of Arkona, and took the bodies out of the well with grappling irons, but life was extinct. Much sympathy is felt for the bereaved ones.

MILL BURNED.

PROVIDENCE, June 24.—The large woolen mill and buildings contiguous at Mystic, Connecticut, were burned by an incendiary fire early this morning.

DISTINGUISHED TOURISTS.

LONDON, June 24.—It is reported that the Marquis of Lorne and the Princess Louise intend making a tour of the United States.

THE FLOODS IN FRANCE.

PARIS, June 24—The river Garronne continues to rise. Several persons have been drowned by the inundations.

AMERICAN IRON.

LIVERPOOL, June 24.—Merchants are selling American iron at Wolverhampton at $5 per ton.

THE BEECHER TRIAL.—RE-OPENING OF CASE REFUSED.—THE JUDGE CHARGING THE JURY.

NEW YORK, June 24.—There was a large crowd of spectators this morning, in attendance at the Brooklyn City Court room. Beecher and his wife sat among the Plymouth throng, and Tilton was early in his seat.

Judge Neilson said that under the circumstances he was compelled to refuse the motion of plaintiff's counsel to re-open the case for the admission of the new evidence. In accordance with Mr. Beach's request, the papers were filed with the Clerk of the Court.

(Via Dominion Line.)

BROOKLYN, N. Y., July 24.—Judge Neilson commenced to charge the jury at 10.50 a.m.; court crowded.

THE POPE'S HEALTH.

NEW YORK, June 24.—A Rome special says the Pope is better in health, but walked around with difficulty.

THE FETE AT ST. THERESE.—ABRUPT TERMINATION OF THE PROCEEDINGS.—EXTENSIVE FIRE AND LOSS OF PROPERTY.

The fiftieth anniversary of the founding of the Petit Seminaire de St. Therese commenced on Tuesday evening last with religious services and a brilliant illumination. Every window in the College on the town side was lighted up with Chinese lanterns and three fine transparent portraits of the founder, Bishop Bourget, and the late Superior, as well as the dome, on the top of which were these words, "Alma Mater," and "50," denoting the age of the Institute. Before the College the band of the Institute played inspiring music from a stand illuminated with about a thousand Chinese lanterns, while the large number of well-dressed visitors, promenading in front of the Institute, added to the brilliancy of the scene. About 700 guests, forming the students during the past fifty years, were present during the fete.

Yesterday morning at 9 o'clock grand mass was celebrated by Bishop Fabre assisted by a choir of 200 priests. Rev. James Lanergan, of Hochelaga, preached a very effective and patriotic sermon, strongly urging the necessity of providing a religious education to the rising generation. After mass the worshippers returned in procession to the large hall of the college, where addresses were delivered by a clergyman of the old scholars, and responded to by Rev. Joseph R. Aubry, Superior of the Seminary. Addresses were also delivered by representative old lay scholars and responded to by new ones. At one o'clock a cold collation served in excellent style, was partaken of by the 700 guests. Bishop Fabre presiding, supported by the late Provincial Premier, Hon. G. Ouimet, Hon. Mr. Chapleau, Ald. Duhamel, L. O. David, and others. The old and new scholars numbered between 600 and 700. At the conclusion of the repast, an adjournment was made to the large hall for the purpose of hearing addresses from the Bishop and other prominent men, music, &c., when an alarm of fire and the signs of great bustle and excitement in the street abruptly put an end to the proceedings. The fire originated in a blacksmith's shop, situated in the midst of a number of frame houses, to the north-east of the college, and, aided by a gale of wind from the south-west, spread with such rapidity that in fifteen minutes all the houses in the vicinity were a mass of flames. Crossing the road, they communicated to the stable and out-buildings of the college; reaching to within thirty feet of the college chapel. Without water, and, worse still, without discipline, the residents were frantic; the priests paralyzed; horses, pigs, and carriages in one confused mass; students removing their trunks, and no one knowing what to do to stop the progress of the flames. Fortunately, the wind was blowing in a direction slightly advantageous to the college; the wood-fuel shed and

considerable *éclat*. Nothing like such an elaborate display as was made last year was attempted, but, still the procession

FRUIT-GROWING IN MANITOBA.

A person who has attempted fruit-growing in Manitoba writes as follows from St. Andrew's: "My faith in fruit-growing in this country is very small. I thought when it grew in Montreal and Quebec that there would not be much danger of its not growing here. But the frost is so severe and of so long duration that it appears to dry them up; then they have the grasshoppers to contend with through the summer, either killing them altogether by stripping them of leaves, or causing the new wood to come so late that it is not sufficiently ripened to stand the frost. It looks now as though the grasshopper plague is to be an annual occurrence. They had no crops here two years since, being the year I sent here the first apple trees, which were all eaten. Then last spring people all seemed to be expecting that they would have a fine crop, and it did look splendid, but before harvest the grasshoppers came in clouds, covering everything and destroying a vast quantity of the crops and filling the ground with their eggs, which are now hatching. In most places the ground is alive with them; so the farmers are not putting in any seed, for if they did it would be all eaten by the grasshoppers as fast as it sprouted. If this state of things continues this is going to be a poor country. Were it not for the work going on in connection with the railroads most of the people would be badly off, as they have not sufficient food, and their stock of cattle are greatly reduced, they having had to be disposed of during the past few years, on account of the failure of the crops."

THE GRASSHOPPER WAR IN THE WEST.

FROM A VERMONT MAN IN MINNESOTA,

We are favored with the following interesting account of the struggle between men and insects in the West:—

It is the opinion of a leading man here, that the plague of grasshoppers will prove less serious than has been anticipated in this State. As he is by no means a sanguine person, but prone rather to see the darker side, I have confidence in his calculations. Meanwhile, the campaign is being opened with vigor in some places. Several towns and counties pay bounties for grasshoppers, ranging from $1.00 to $4.00 or $5.00 per bushel. Yesterday 300 bushels were brought in here (at St. Peter), and the rate of payment is now $2.00 and $1.60 in this town. I went this morning to the place where they are delivered. Forty bushels had already been brought. Holes are dug in the sandy bottom along the river ("intervale" it is called in Vermont), like a large grave. Farmers come with teams and square-box-waggons; and I may remark in passing, that a team here always means two or more horses; the expression "single team," or "one horse team," so familiar in Vermont, is unknown. In these waggons are several wheat bags, filled with grasshoppers; the load looks as if they were carrying grain to market. Parties also come with wheelbarrows; others draw baby-carts; others carry bags on their shoulders; all bring in these a load of grasshoppers to the market. The contents of their bags are poured into a half-bushel measure, which is emptied into the pit before described. When this pit is nearly full, it is filled up with sand, and becomes indeed a grave for millions of the dead, the dying, and the yet living; for before bringing the hoppers, farmers kill them imperfectly, by scalding while in the bag; not from considerations of humanity, but to prevent them from hopping off. The whole mass looks reddish, somewhat as if blood had been poured over it. Though but recently caught, and in a large proportion alive, they smell very badly. The way of catching is to scoop them up with a net or bag, hanging from an iron hoop fastened to a handle.

Under this bounty system, the unemployed men and boys turn out in large numbers, and it is estimated that some 2,500 bushels had been delivered over to the authorities, as the result of a few days work in Nicolet, Le Sueur, Blue Earth and Brown counties. But system is lacking; one town gives a bounty, another does not. Of course no certificate of origin can be required with the hoppers; thus nothing prevents a man from catching them in a town which pays no bounty, carrying them to a town which does, and saying that they were caught in the latter. Moreover, the bounty is rarely legalized. In only a few localities has the Board of Supervisors (our selectmen), or that of County Commissioners, taken any action; in most towns and counties cash is paid till the treasury is drained— a process which does not take long. After that town and county orders are issued, of doubtful legality; this is done here to-day, as yesterday's 300 bushels drained the Nicolet county treasury. The idea is to get these orders legalized at the next meeting of the board. Everywhere there are parties for and against such action; so grasshopper bounties are going to be a bone of contention in politics, and there will be speculation in orders;—"bulling and bearing." The leading idea is, ultimately to make the State refund these bounties to the counties and towns.

Where bounties are given of course no machine is used for burning or otherwise destroying them. Where no bounty can be had, either nothing is done (and that is the most general course), or some machine, invented for the purpose, is used. There is more than one contrivance. One, for example, is a large tray, like a sugar-pan, mounted on wheels, with a revolving pan in front, which sweeps the hoppers into the fire carried in the pan. The machine, in every instance, goes of course in front of the horses, not that these *push* instead of *pulling*, but their heads face the machine, and by a reversed arrangement of pole or tongue, and single-trees, with a yoke, the draught is given in the proper direction. Sometimes rollers are used to crush the hoppers, or there is a combination of crushing with cremation by heating the cylinders, together with scalding for those who can fly a little, or who are tossed up by the machine into a vessel of hot water on its top.

All this answers only for hoppers hatched here, and not yet able to fly. But it is something that people feel they can no longer afford to sit still and do nothing, in Mussulman fashion. If every man caught his own hoppers, or, if he himself had none, helped his neighbors in the catching, without bounty, it would be best. But people here are accustomed to look to the State for relief; and so the advocates of bounties say: "If the people lose their crops, they have to be fed and clothed at the expense of the State. It is better to let the State pay them for exerting themselves now, that the crops may not be lost." On that ground also, it will be urged that the Legislature shall next winter refund from the State Treasury whatever is paid out now by counties and towns. The poverty of the frontier, the many foreign-born citizens, accustomed to lean on "the government," and a desire among the money-sharks to have orders for speculating in—all help along this unhealthy public feeling.

I append two other items on the grasshopper question, from a local paper, although these have reference, not to Minnesota but to Kansas.

Pupils at the Deaf and Dumb Asylum of Kansas, from twelve acres of ground one day last week, captured and destroyed twenty bushels of grasshoppers. One half gill of them numbered 544 and weighed 540 grains. One bushel was estimated to number 283,648.

Prof. Jenkins, Rev. Bartlett, and others at Olathe, Kan., have tested the qualities of grasshoppers as an article of food, and pronounce them, after being boiled in water to clean them, and fried in butter, to be quite palatable, and even good eating, tasting like small fish.

THE FOURTH CROP OF GRASSHOPPERS.—The Lincoln (Neb.) *Star* denies Professor Riley's statement that the second generation of grasshoppers cannot propagate, and declares that this is the fourth crop that has hatched out in succession since the 'hoppers left their native haunts. Four years ago, says the *Star*, the locusts overran the British possessions north of Minnesota. The next year they hatched out and visited Minnesota. They laid their eggs and died. The next spring they hatched out, and came down on Dakota and Northern Iowa, and laid their eggs. The next spring they hatched out and overran Nebraska and Kansas. This spring they hatched again, and the end is not yet.

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BEEVES.—Prices were a trifle better than on Thursday and Friday last, not up to the figures quoted a week ago by at least ¼c per lb.

MILCH COWS.—Not enough trade to-day to make a market; but the 89 fresh cows received during the week were disposed of at a range of $50 to $90, with two of the finest sold at $108 and $110 respectively.

CALVES.—The demand was weak for milk-fed veals at 5c to 7½c per lb and buttermilk-fed calves were not valued at any price.

SHEEP AND LAMBS.—Sheep were forced off at 4c to 5¼c per lb, and lambs were selling slowly at 5½c to 7½c per lb, with a few up to 8c to 8½c. The worst market of the season for the selling interest, and not likely to improve for several days to come.

SWINE.—None on sale alive. Dressed hogs were firmer at 9¼c to 9¾c per lb.—*New York Tribune*.

— The Treasurer of the Ladies' Benevolent Society ac