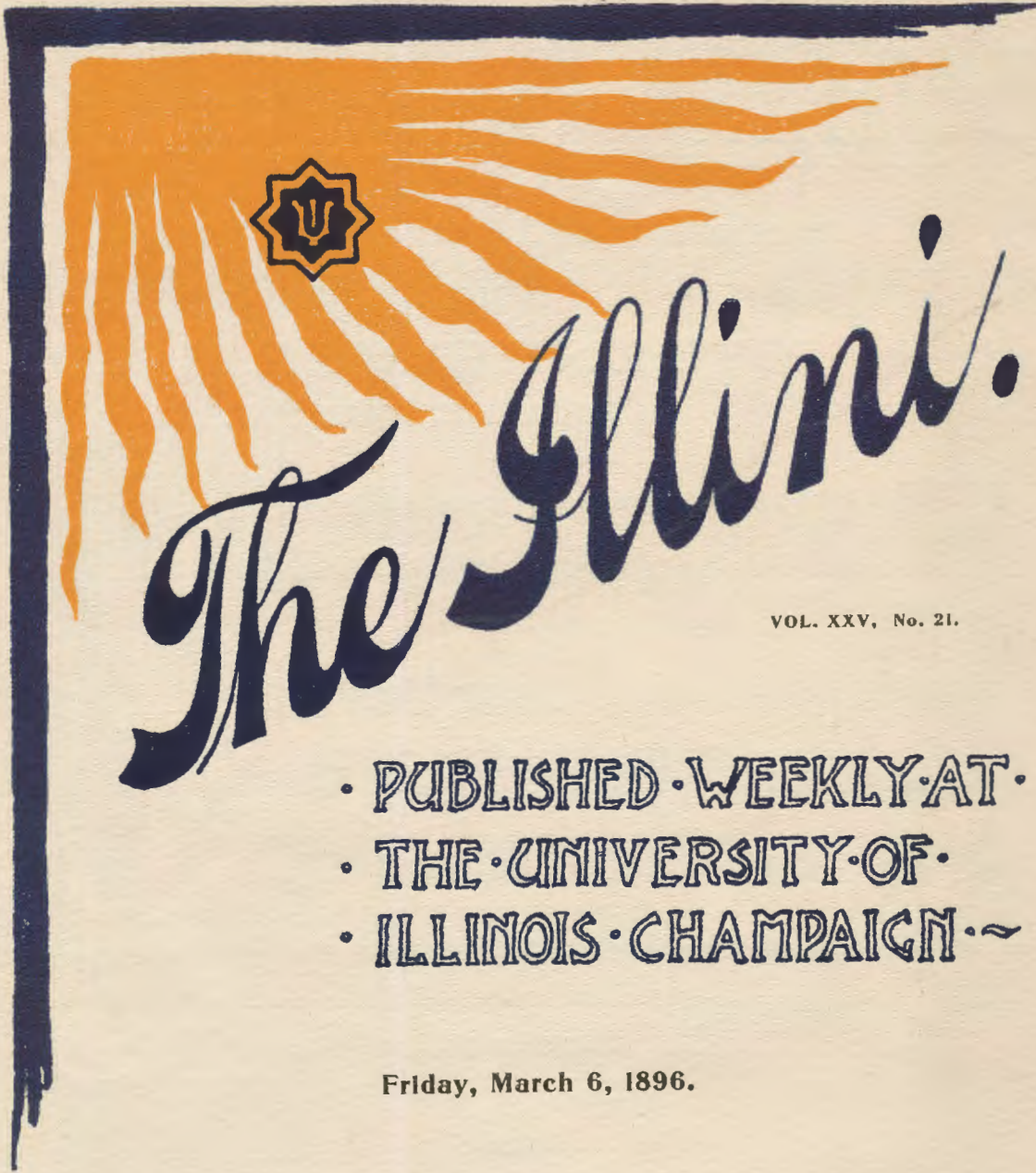


BIOLOGICAL STATION.



# The Illini.

VOL. XXV, No. 21.

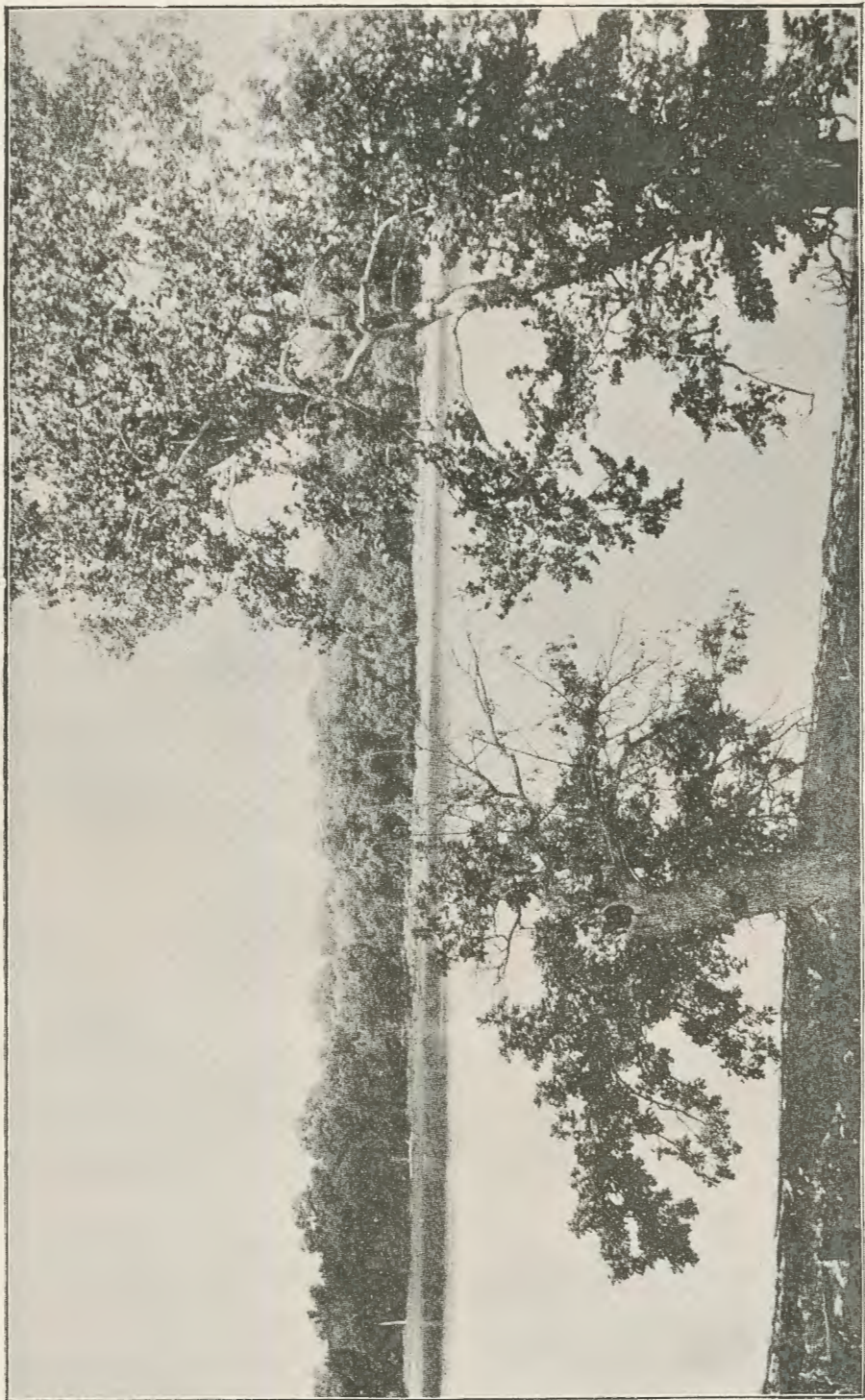
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Friday, March 6, 1896.

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NUMEROUS ILLUSTRATIONS.



ACROSS MATANZAS LAKE, NEAR MIDDLE.

# THE ILLINI.

VOL. XXV.

CHAMPAIGN, ILLINOIS, FRIDAY, MARCH 6, 1896.

NO. 21.

## UNIVERSITY OF ILLINOIS BIOLOGICAL STATION.

### PART II.

Early last fall I had occasion to visit the biological station at Havana and, while the four days spent there were in a great part occupied by my work, I saw much that was of interest. My work took me rapidly from place to place and I perhaps became better acquainted with the region over which the station

to the east he looks down on a vast stretch of fertile corn land, beyond which in the distance, hardly perceptible on account of the gradual rise of the land, are the east bluffs of the valley.

The town itself is of interest, it being one of the older towns of the state. It owes its origin



DEEP SLOUGH, NEAR MATANZAS LAKE.

is doing its work, than with the station and the more exact character of the work being done there.

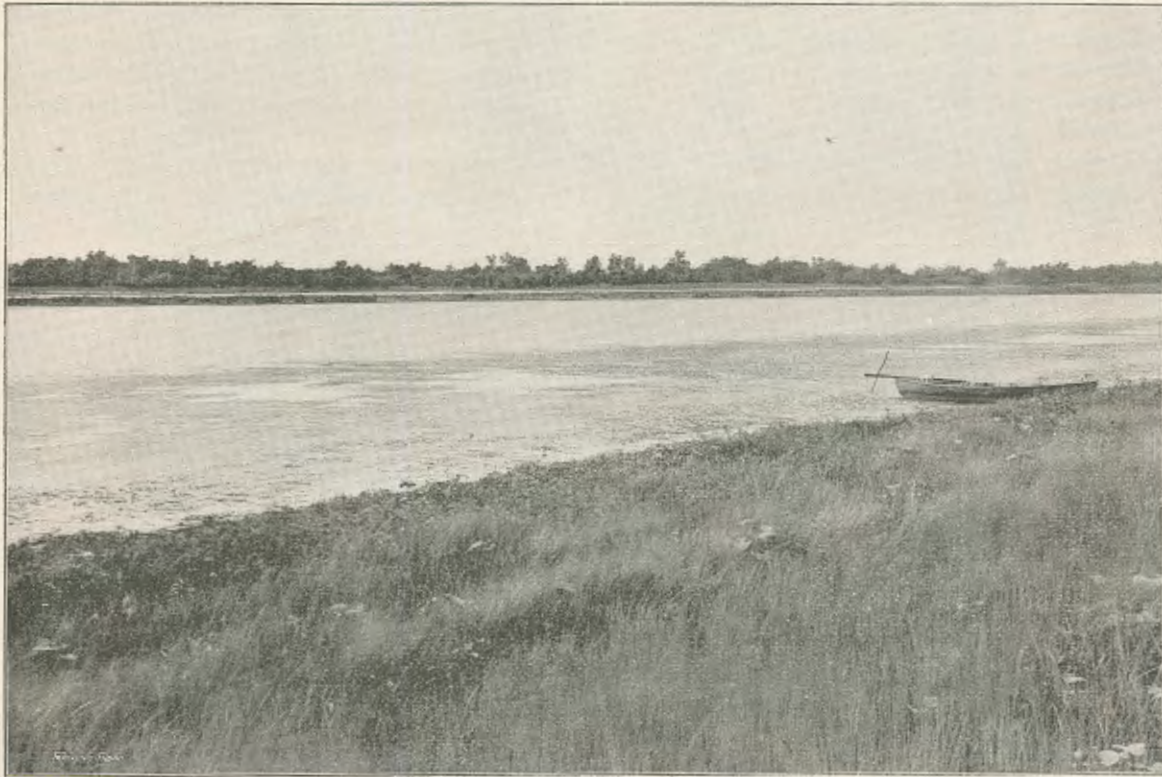
Havana, the headquarters of the station, is directly connected with the University by the Champaign and Havana branch of the Illinois Central railroad, being one hundred and one miles distant. The situation of the town is in many ways unique. It is built on a long ridge of sand, which rises to a considerable height above the general level of the valley at this point, so that a person standing on the high points of certain streets can look westward across the town to the river and on across the bottom lands to the bluffs beyond. Turning

and early development to the traffic that passed up and down the Illinois river before the construction of railroads and the subsequent decay of river travel. Many of the houses show a much earlier style of architecture than that now in vogue. Along the river are still standing some of the old warehouses, formerly essential factors in the welfare of the town, which have long ceased to play the part for which they were erected. A regular line of boats is still in service but is of little importance to the river towns through which railroads pass. Unlike the majority of river towns, Havana has not suffered since the appearance of the railroad, but with two such roads has

increased in importance and is a thriving town with many substantial business houses and handsome homes.

As is true of all the larger towns along the river, fishing is here an important industry, and, to one not acquainted with them, the methods used in this work are of interest. Many of the people engaged in this occupation live in the house boats seen along the river banks. Some of the larger firms own steam launches with which they travel to and from the fishing grounds which they control,

ing with sheets of pure clay. The surface of these sandy areas has been blown into undulating mounds and ridges, with occasionally an expanse of barren sand. On these sandy areas the vegetation is noticeably different from the surrounding country. Here is found the one species of cactus (*Opuntia Rafines quii, Engelm*) which is a native to Illinois. The state, however, has no reason to be proud of this lone intruder, which, by its more determined disposition, has forced its way ahead of its more southern cousins and gained and re-



ILLINOIS RIVER, HAVANA LAKE.

either by ownership or lease. The headquarters of the Illinois State Fish Commission are at present located at Havana.

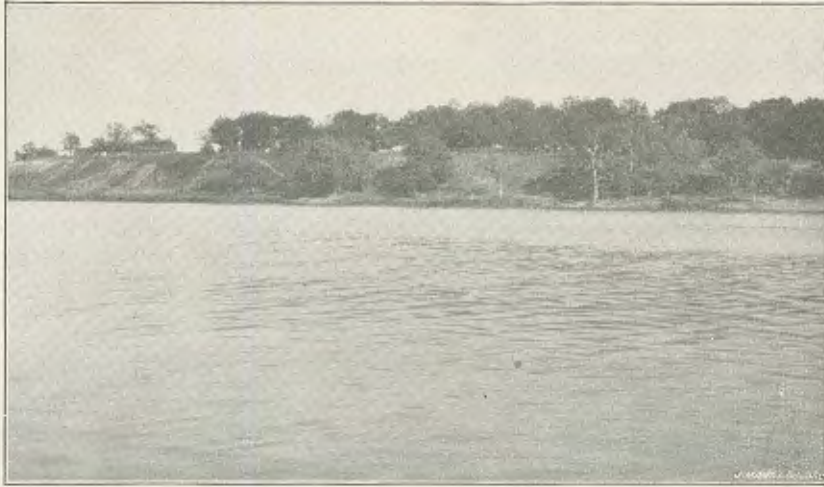
A visitor to the station, though not directly interested in biology, will be intensely interested in the region about Havana over which the station is doing its work. The valley is there very wide, and between its bluffs are many strongly contrasted features. The valley itself is away from the muddy flats along the river, with their lakes and sloughs, generally filled to a considerably higher level with extensive deposits of pure sand, alternat-

tained a home on the sandy reaches of southern Illinois, following the sandy courses of the larger streams as far as the central portions of the state. It is not an uncommon thing to find this unpretentious plant nestled closely down under the grass on the very spot one has selected as a desirable resting place. It then becomes a very prominent and important feature in the flora of the state, and unless one has well braced his character, it is very apt to cause a puncture in his moral as well as his physical being.

A notable feature of the region is the Spoon

river, which empties into the Illinois opposite Havana. It is, from source to mouth, a typical prairie stream, a quiet, sluggish river one day and perhaps the next nearly overflowing its banks, as it brings down the waters that heavy

spicuous the much greater width of the stream just above, which is known as Havana lake, but which is in reality the normal river course. It may be here said that the Illinois is very sluggish at this point. Station observations



EAST BANK OF ILLINOIS RIVER.

rains have thrown upon the country nearer its head. An interesting phenomena in the formation of river courses is here presented. The Spoon river has brought down an immense

taken at low water show a current of less than a mile an hour.

The bottoms are dotted over with lakes and sloughs of varying size. Thompson's lake is



FOOT OF QUIVER LAKE, ILLINOIS RIVER AND BOTTOMS, FROM TWIN MOUNDS.

amount of sediment and this has raised the bottom lands below its mouth, greatly narrowing the main stream and forcing it against the sandy ridge on which Havana is located. This sudden narrowing of the river makes very con-

the largest in the neighborhood of Havana, it being more than ten miles in length and of great width. With its sandy shores and fringe of forest trees it presents an appearance much similar to the more stable lakes of other re-

gions. In strong contrast with Thompson's lake is Flag lake, a short distance away. This lake is no more than an immense slough, covering many thousand acres. Ordinarily it is for the greater part not more than four feet deep. In it grow the pond lily and the chinquepin in great profusion, together with the flags and rushes which have given it its name. Innumerable lakes, intermediate in character between these two, are scattered over the valley. Many of these bear quite fanciful names.

The bottoms are, as a rule, densely wooded, in addition to which is found, in the summer, a dense undergrowth of rank and rapid growing plants. In many places the ground is covered with wild vines, which, with the bright flowers of autumn, lends to such a locality a

expanse of exposed ground, which later was covered by the more rapid growing plants of the neighborhood. The winter of '94-95 did not furnish enough water to restore the lake, and its bed remained dry throughout the entire season. During the summer it yielded an immense crop of corn to the owner of the land. It was in this condition when I saw it. The high water of the past winter has filled the lake bed and it will probably remain in the present condition during the coming season. The contrasted character of this lake during the past two years has offered to the station a most interesting problem for study. Formerly it was a large body of water teeming with varied forms of life. It gradually dried out and, with the disappearance of the water, the bulk



QUIVER CREEK, ONE MILE FROM LAKE.

most pleasing appearance. Here and there immense tracts of timber have been killed, apparently by the water during the periodic overflows. Coming suddenly upon such a barren tract of country, destitute of all life and surrounded by the dead and decaying trees, one is most forcibly impressed by the forlornness of the situation.

One of the most interesting points under the observation of the station is Phelps lake. Ordinarily this lake is considered one of the permanent features of the region. In the early summer of 1894, when the station began its work, it was a broad stretch of shallow water, almost free from the higher forms of vegetation, but teeming with animal life. As the season advanced, the water rapidly lowered and finally disappeared entirely, leaving a broad

of the life present was annihilated. It remained dry for an entire season, but is now again filled with water. What forms will be found there and how long a time will be required to restore it to its former biological conditions?

Some distance below Havana is Matanzas lake, by far the most attractive lake of this region visited by me during my stay. Surrounding the greater part of the lake are heavily wooded bluffs of some little height, which, with the broad sandy shores, make a picture of real beauty, such as one might expect in the lake region of Wisconsin or of New York. It is, however, true that beneath this superficial beauty lies a shallow, muddy lake, saturated with malarial contamination.

On the eastern bluffs of the river are a num-



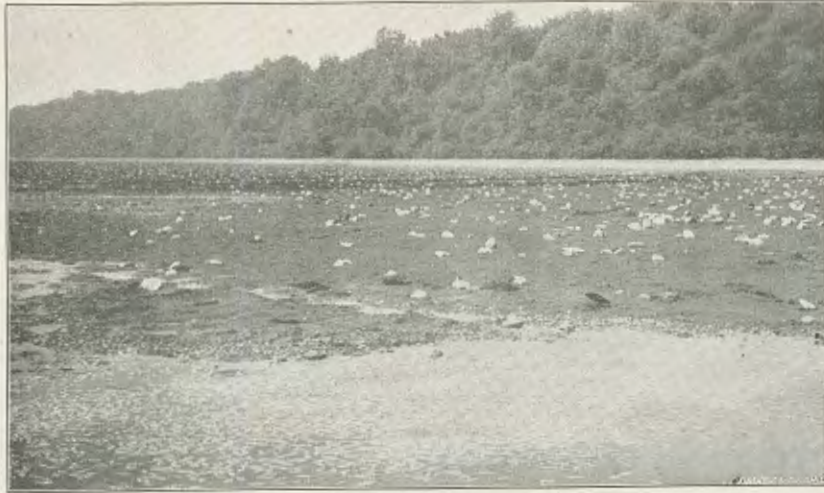
QUIVER CREEK, NEAR ITS MOUTH.



LOTUS BED, NEAR HEAD OF QUIVER LAKE, WEST SIDE.

ber of the artificial mounds so common along the larger water courses of the central United States. They were erected by the so-called mound builders. The mounds of Illinois have as yet had no real scientific examination and

As the Illinois flows toward its mouth it crosses and recrosses the broad bottom lands, only occasionally coming in close proximity with the bluffs on either side. At such points a good survey of the river is obtained. The



PHELPS LAKE, AUGUST, 1894. DEAD FISH AND MUSSELS.

offer a most inviting field to some student of archaeology. These ancient people seem to have followed the larger streams in their gradual diffusion over the land, coming, as some suppose, from the south. Evidences of the

towns of the present day are, as a rule, located on such points. It is easy to believe that the same factors which determined the town sites of to-day must have appeared in one or another form to the prehistoric people who



PHELPS LAKE, AUGUST, 1895. CORN AND PUMPKINS.

early occupation of the country by these people are especially numerous and pronounced along the Mississippi, the Ohio, the Illinois, and other large streams throughout the Mississippi valley.

traversed this country in the past. The remaining evidences of their occupation seem to carry out this surmise, for at nearly every point where the river is bounded by high banks we find the artificial mounds men-



tioned. These people were of a warlike disposition, and many suppose the more prominent mounds to have been places of observation, from which the approach of an enemy might be detected. They were an idolatrous people, worshipping the sun and fire, and many of the mounds are doubtless places where sacrifices were made to the gods of the people, evidence seeming to prove in many cases that the offering was nothing less than a human being. Other mounds are doubtless the graves of the great men of the time; warriors and states-

miles above the city, on Quiver lake, at the point chosen for the field headquarters of the station, are two large companion mounds, somewhat conical in shape. Below, in a large park owned by the railroads entering the city, are other mounds of great size. Still lower down is one of most peculiar form which has been called by Mr. Hart of the station the "bird mound," on account of the fancied resemblance it bears to a bird lying on the ground with head, wings and legs outstretched. A short distance below the surface of the soil,



QUIVER LAKE AND ILLINOIS RIVER, FROM EAST BLUFF.

men of that early people. In erecting these huge piles of earth the people were unconsciously erecting monuments to their race, a race once of great numerical strength, who came into the country, lived and practiced their rude arts of war and peace, and after what must have been a long lapse of time departed, where and how no one now knows. Their mounds and their contents alone tell us of the presence of this strange people. At Havana the city park stands on such a mound, which takes the form of a rude cross, the arms of which are of about the same length. Two

about this mound, burnt wood and other evidences of fire are abundant, as are also bits of pottery in the immediate neighborhood. These artificial mounds are always to be distinguished from the natural mounds and sand hills, which occur in the same neighborhood, by the character of the earth entering into their construction. They have been erected on the sandy soil of the region, but all earth entering into their construction is a dark black soil full of the shell remains of mollusks, showing that the dirt was obtained from the river bed near by. It is hardly possible to conceive

of the amount of labor necessary to erect one of these mounds, containing in many cases millions of cubic yards of soil. To-day it would be a gigantic task. What must it have been to the rude civilization of that day?

As has been stated, the field headquarters of the station are located on the shores of Quiver lake, two miles above the town. The photographs of this lake serve better than words in its description. The house boat is so thoroughly equipped that work can be carried on for some time without recourse to

describing one of the stations and the methods of reaching it, gave me the following directions: "Walk until you are tired out, and then walk ten miles farther." I proved the truth of his statement to my entire satisfaction. The character of the collections and the methods used vary greatly with the sub-station. Everything collected is bottled and labeled after such methodical preparation as the case requires, with the exception of the constant and more common sorts. Concerning these latter, full notes are made on each visit.



VIEW UP QUIVER LAKE.

the town laboratory. As most of the staff live in the town, this is not necessary. From these headquarters all the field operations of the station are carried on. The daily routine is one of interest and of hard work. The day begins with an early breakfast at Havana (it is true that Dr. Kofoid was rather tardy in this respect on each of the mornings of my stay,) after which a two-mile row brings one to the boat, where the necessary arrangements are made for the work of the day. If a sub-station is to be visited, it may be reached by water or by a long tramp. Mr. Newberry, in

After this work has been completed, the balance of the day is spent at the boat, studying the more perishable forms obtained and arranging and classifying the general collections of the day. At 5 o'clock it is usual to return to the town. It is quite in order for the staff to return in the evening to the office and spend the time in study and other work connected with the station. This latter is, however, voluntary.

Such is, in brief, a description of the general work of the University of Illinois biological station, and of the region over which the work

is being done. Of the details of this work I have not spoken, as my stay was far too short to make me familiar with them, and because they might not be of interest to the general reader. Each member of the staff is pursuing some special line of study and investigation, and as such work is completed the results will be published. The coming report of the station will contain about five hundred pages and fifty cuts, all pertaining to the work already done.

The situation is one of unusual interest, and the work is of great importance. It has seldom been my fortune to crowd into four days so much that was of such great interest, and in closing I can do no better than thank Professor Forbes for the opportunity made possible by him for me to visit the station and see something of the work and the surrounding region.

CHAS. T. WILDER.

**M. E. and E. E. Meeting.**

The third meeting for this term of the M. E. and E. E. society was held in Room 101, Engineering hall, Feb. 29. The following program was rendered.

Mechanical Exhaust.....Sweeney  
Storage Batteries.....Everett  
Discussion on the Efficiency of Storage.....

Batteries.....Professor Esty  
Artificial Ice Making and Refrigeration...Whitham

Meeting adjourned at 9:15. The next meeting will be held March 14 in the society room, and as a special program will be prepared, it is desired that all members be present.

**Changes in the Courses in Economics**

There are three changes from the schedule in the courses in economics, for next term.

The course offered in statistics is withdrawn, the course on local taxation in the United States is changed to a three-fifths course, and the requirement for admission to the course on social problems is withdrawn. The course on local taxation will be treated by Professor Kinley from the economic side entirely and Professor Tooke will treat the same subject from the legal standpoint in his course on the "Law of Taxation."

**The Battalion Athletic Entertainment.**

The University battalion will give an exhibition along the line of athletics at Military hall Saturday night, March 14.

The object of this exhibition is to raise the

funds to purchase the medals, promised to the winners of the events in the series of Saturday meets which has just closed. It is intended also to raise money to send a representative team to Chicago to the indoor meet to be held there soon.

The exhibition will be given by sections from the respective companies of the battalion. One company will give an exercise in the horse drill, another in calisthenics, another with the dumb-bells and another with pyramid building. Representatives from the companies will afterwards compete for the championship in the manual of arms, the winning company to receive a handsome banner, appropriate to the occasion.

There will be music in abundance and a good entertainment will be given.

**PROGRAM.**

1. Competition Drill, Cos. A and B.
2. Mat Exercises.
3. Parallel Bars.
4. Competitive Drill, Cos. C and D.
5. Pyramids by Co. D.
6. Vaulting Horse by Co. A.
7. Tumbling.
8. Side Horse Exercises.
9. Anvil Chorus, Co. C.
10. Club Swinging by the Class.
11. Awarding of Banner.

The general admission will be 25 cents. Let all the students come out and help the Athletic association and promote a good cause.

**Vote of Thanks.**

It is the earnest desire of the class of '97 to express their indebtedness to the class of '99 for their exceeding kindness in furnishing "sweets" for the junior hop. Those members of '99 will undoubtedly be suitably remembered when next '99 has a social. COMMITTEE.

Athletic interest among the girls at Cornell is growing at an alarming rate. They have just been permitted instruction in fencing. They now desire to have a crew and to row in a shell. The authorities are not pleased at this development and suggest the necessity of a safe boat. The girls have their swimming tank, however, and propose to make a shell as safe for them as for the men.—U. of P. Courier.

Yale will send a crew to the Henley regatta next spring.