

U. S. DEPARTMENT OF AGRICULTURE
BUREAU OF BIOLOGICAL SURVEY

Form Bi-689

FIELD DIARY

Mr. Vernon Bailey

Chief Field Naturalist
(Official title.)

Period, June 14 to 1923

Wichman
NOTICE

This book is Government property. The finder is requested to mail it to the BUREAU OF BIOLOGICAL SURVEY, DEPARTMENT OF AGRICULTURE, WASHINGTON, D. C., or deliver it to the official whose name appears above. A detachable addressed frank will be found on the last page; by tying this on the cover the book may be mailed without postage or wrapping if fastened shut.

1923

June 14, Left Washington on Pennsylvania Ry for Lansing Michigan and other points in Lower and upper peninsula to study the beaver problem and test out keeping beavers in captivity for fur supply.

Found good high country on tops of mountains in Pennsylvania east of Altoona where beaver might do well but saw no extensive areas of aspens.

June 17, Reached Detroit in Morning and did not leave until late afternoon so visited Isle Belle Isle. Reached Lansing in evening and went to Hotel Roosevelt.

June 18. Found J. Stokely Ligon
and went to see John Baird,
Director Department of Conservation.
Got permits for taking beaver ^{and other game animals},
but had to go to Prof. Cooper,
at the Agricultural College for a
permit to collect song and insectivorous
birds.

June 19. Left Lansing for
Red City, via Grand Rapids
arriving at 4 P.M.
Mr. C.W. Wing, county agent, met
us and we laid plans for seeing
country suitable for Beavers
the next day.

Passed many swamps and
small lakes and good
streams well suited to beaver
on the way from Grand Rapids
to Red City.

June 20. Mr. Wing took us
in his Ford over a lot of
good Beaver country, hilly
rough, sandy, swampy land
worthless for farming but much
of it covered with second growth
and locally by extensive areas
of young aspen

Found especially favorable
conditions on farm of Andrew Vose
where a small lake fed by a
spring creek and with no outlet
is partly surrounded by aspen
and is within reach of large supply
The lake contains 40 or 60 acres
has some marshy & cattail
shores, lots of tules & water lilies
& other water plants, is fairly
deep in places and is easily
fenced and controlled.

A cattail marsh at edge was
being fenced for muskrats by

the Vase boys who are
eager to try havers and able
to fence and carry out any
plans necessary for them carried.
They are strong intelligent people
who have made farming pay,
have several thousand acres of
land and raise good crops
with clean fields, straight rows
of corn, pedigree seeds, good
stock, good buildings and
machinery and automobiles.
The boys have taken special
courses at the Agr. colleges
and are strong, intellectual
young fellows with no ambition
to leave the farm and go to
the city to live. The havers
farming appeals to them and
they will make a success of it
if any one can.

June 21, Took train from
Red City to Boyne City
and went to Wolverine Hotel,
a very comfortable place to stay.
Met Mr. W. H. White and
his two brothers and talked
over beaver locations and
planned trip for tomorrow.
Mr. White is president of the
Boyne City, Gaylord and Alpena
R.R. & Lumber Co. and interested
in many other large projects
including a big Lumber Co. in
B.C. His principal interest
in beavers is from the
lumberman point of view,
reforesting cut over land or
making use of the aspen
growth that is now worthless
and giving a permanent value
to northern land not suitable for farming.
He has about 65000 acres of cut over land
to find a use for.

June 22. Went out to the farm with Mr. Thomas White, one of the brothers. The farm is being developed in the upper valley of Warner Creek, about 4 miles west of Elmira and about 17 miles S E of Boyers City. It consists of several thousand acres of good valley land, swamp land along some of the streams, and much second growth timber on the bordering ridges. It includes the head waters of the Warner Creek drainage with some old beaver meadows, and much aspen growth along the valley borders or on cold slopes of steep ridges.

By throwing a beaver fence across the creek valley a large number of beavers can be held

on the ground above with
room for many dams and
two good large ponds, with
an inexhaustible supply of
aspen for future years!

We planned for a small
inclosure on the creek for a
colony for close study and to
fence near the farm buildings
led for a fence across the creek
above to start a colony for
stocking that part of the stream,
all on land of the Whites.

Just over the ridge to the
south is the Jordan River
valley, of excellent beaver country
where the whites own a lot
of land that can be fenced
above and below and a large
number of beaver kept.

June 23 - Mr. White sent us over his railroad to Alpina in his Railroad Ford Sedan, a regular Ford Sedan fitted to the track on steel wheels, with his Ry. Superintendent, Mr. Charles Haire, an experienced Ry. & lumber man & a mill owner besides.

We examined the country all across the Peninsula and ^{saw} much good beaver country and much level swamp country where beaver would destroy much valuable timber and do great damage. Other areas are better adapted to beaver than to timber or farming.

June 25, Crossed the strait to
St. Ignace and on to Newberry
without change of cars.

Found the local game warden
Ed. Nibs, who could not go with
me tomorrow so called up his
son and went to Whitefish Lake
on June 26, where beavers were doing
damage to roads. Found dams
all cut and beaver driven away
or killed and no chance to get
them.

June 27, Went west about 25 miles
to another place where beavers were
injuring roads in big swamps
near Zeguasname River, but
the dams had been torn out
and beavers driven away.
Found another house and dam
on creek but not used at present.

June 28 Came from Newberry to Michiganamme and went to the Krogan House, the only hotel here.

June 29 - Got saddle horse and rode to Camp nine lake and found two occupied beaver houses then after supper went to Spuer lake and found a fine large beaver house and saw a big beaver. Went nearly to Pithecoat lake but had to turn back on account of darkness.

June 30, Went to Beaufort lake and found an ideal camp place so planned to come here to camp on the hill overlooking Beaufort lake, the first of the Three lake series, about 3 miles west of Michiganamme,

July 2 - Moved camp and outfit
out to Beaufort Lake, and put up
big tent under shelter of trees,
and two smaller tents on each
the sides.

Henry Myrick and Scoville
Aspinwall arrived in time to
help put up the tents and
Charles Knobell came out with
us a few days later - July 4.

Ernest Ward came a few
days later.

Mr & Mrs Aspinwall arrived
July 6 from their trip up the lakes

Mosquitos were numerous
and fierce.

July — Remained at
Camp through July and
August, making and testing
out beaver traps for taking
the animals alive, exploring
the lakes for beaver houses
and colonies, baiting them
up with aspens to be caught
in traps or corrals later.

Made trips to Ishpeming and
Marquette or Duluth to get wire
and steel and chains for traps
and tested out several forms,
some of which proved failures.

Aug. 10, caught a young
beaver near the traps that
had probably sprung the trap
and did not dare come past
it to the water.

It weighed $8\frac{3}{4}$ lbs. and
is apparently a male.

Aug. 17, Caught the old female
beaver, mother of the young one
taken, and brought her to camp
in the trap to be photographed.
She weighed 40 lbs., same as
the trap. I squeaked glad to see
her young and he was still more
glad to see her.

She was not cross or wild from
the first and would only blow and
hiss at me, then quiet down as
I stroked her back and sides.

Aug. 24 Caught another young of the same family in the big trap. It weighed $10\frac{1}{2}$ lbs. and seems to be a female. Seemed glad to see its mother and brother and all snuggled up in the corner of the pen and then went into their house together.

They are all dark, with brown outer hairs on heads and backs but the under fur is almost black.

Aug. 28. Caught another young beaver in the same trap and place as the last, making the third of this family. He weighed $9\frac{1}{2}$ lbs. and was very gentle and quiet and hungry. Had evidently been in the trap all night. Was sitting with just his head out of water when first seen.

Had a call from the Michigan Game Commission, about eight - all including Mr. Stowell of the Conservation Comm. Mr. Melan, of Ann Arbor, an old neighbor of mine from Manchester where we were both born. Also a member of the legislature and Mr. Sandberg, the deputy warden from Ishpeming.

Mr. Stowell, secretary of the Conservation Department, told me to go ahead and arrange with Deemer, who takes licenses place, for a warden to learn how to catch beaver.

Aug. 30, Discovered that our last
baby beaver had escaped, probably
by climbing over the top of the fence
the possibly by squeezing
through one of the 4 inch square
mesh holes which he could reach
from the top of the beaver house.
He was the smallest of the bunch
but weighed $9\frac{1}{2}$ lbs. and seemed
too large to go through even
a stretched out 4 inch hole.

The fence I am using is the
Banner Poultry Fence of the
American Steel & Wire Co., 5 feet
high of 25 wires and 4 inch
lateral stays.

The 10 lower wires are $1\frac{1}{2}$
inch apart, the next 4 2 inches
apart of the upper 9 4 inches.

The top & bottom wires are No. 14
the rest No. 16. It costs 65¢
a rod. ~~is galvanized & very durable~~

Acme Junior Poultry Fence
Charles Williams Stores, New York.
Cat. no. 20 R 2434 M. looks good.
24 bars, $4\frac{1}{2}$ in. stays,
No. 14 & 18 wires, galvanized.
 $1\frac{1}{2}$ to $4\frac{1}{2}$ in. spacing.
10 rod rolls, 72 in. high \$ 4.76
" " " 60 in. " \$ 4.28.
See catalogue.

The old beaver has
gnawed at it for 13 days,
or nights, without making a
dent in the wires, but has
skinned & hurt her nose
on it. A one inch mesh
would be better for the beaver.
She does not try to climb off
the ground nor dig under
but gnawed four of the dry
cedar posts nearly through.

Aug. 31 Bought a box
and took my three beavers
on the 5 AM train to
Marquette where I had to lay
over until 5:30 next morning
for train to Boyne City.
Stayed at Hotel Marquette, a
very comfortable place.

Aug.

Sept. 1. Left Marquette at 5:30
AM and arrived at Boyne City
1:40 PM. where Mr. White & family
met me at train.

Took the beavers to W. H. White's
barn and put them out in a room
with wash tub for pond and
cottonwood boughs to eat.

Couldn't find the right kind of wire
for fencing and had to send to
Chicago to Am. Steel & Wire Co. for
Banner Poultry netting.

Sept. 2, Sunday & couldn't get
the Whites to even take me out to
look at beaver ground so did my
back writing & expense account.

Sept. 3 - Labor day, but got
a truck to take me and the Haves
out to White's farm & got
2 men and a boy & mule team and
started building fence, setting
posts & getting ready for work.

Sept. 4, finished setting posts &
putting underground wire, building
dam and house for beavers.
Set 40 rods of cedar posts 8 feet
apart across creek and valley
at lower end of series of old
beaver dams meadows,
giving about 2 miles of valley at
head of Waves Creek for them to
occupy. Returned to Boyne City in evening.

Sept. 5 Watched all day for
wire but it did not come.

Sept. 6 - Went out to farm &
made final arrangements for finishing
the beaver fence when the wire comes
and caring for and placing the
beavers when the fence is done.

Marked each with a quarter
inch leather punch hole in
tip of right ear. In the
old beaver the hole tore out of
edge as she jerked her head
away and in the young the hole
was punched to cut the edge
and leave it open as a circular
notch.

Sept. 7 - Missed the early morning
train so did not reach Mackinaw
until 10 AM & had to wait for
a 4:40 PM train for Michigan.

Sept. 20 Moved camp to
Spencer Lake to be nearer beaver
traps.

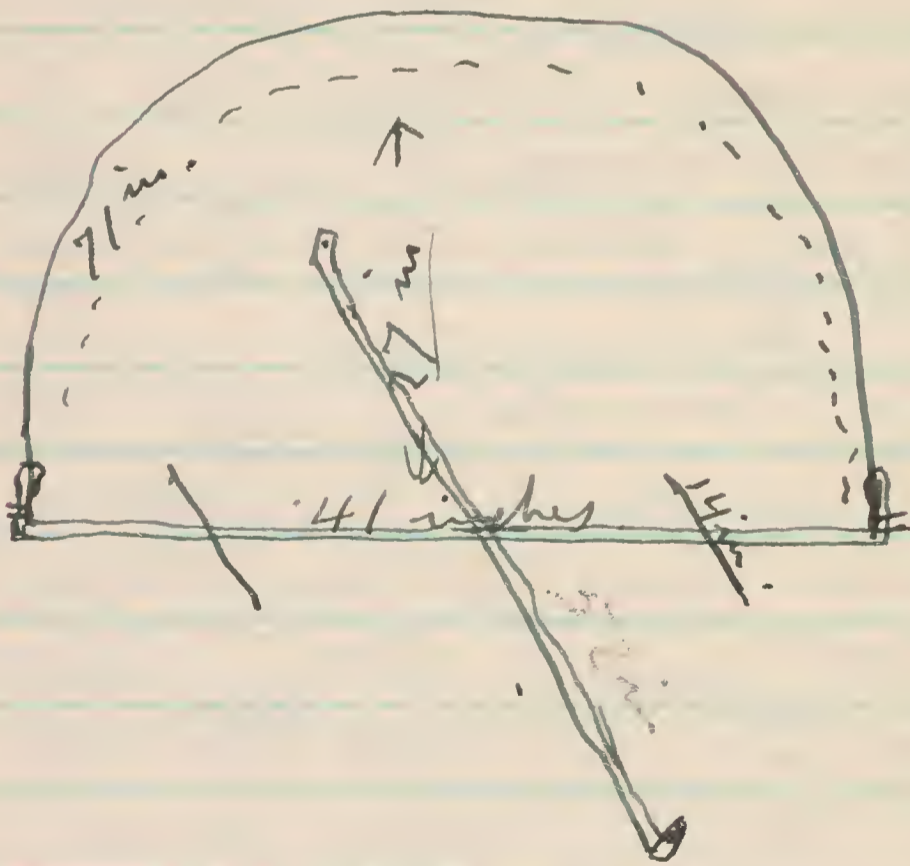
Caught two weavers in Peter's
Lake Sept. 24 + 25 and
started with them to Le Roy for
the Vass boys Sept. 28.
Left Michigan 12:40 P.M.
and reached Mackinaw 9:30.
Had to stay all night,
having at 7:25 A.M. Sept. 29
and due at Le Roy at 1:22 P.M.
Large beaver dead on
arrival at Mackinaw.
No cause apparent except fright
and nervous shock of journey.

Sept. 28 Started with 2 beavers
for the Voss boys at Le Roy.
One died at Mackinaw at
9:30 P.M.

Sept. 29 Reached Le Roy at
12 P.M. and was met by
Merle Voss with truck and
drove 14 miles to farm
Put beaver in large stall
in barn with trough of
water and plenty of food and
a warm nest under manger.

Sept. 30. Examined beaver
inclosures and planned house
and dam and construction of
fence.
Went to Reed City in evening
to catch train but had to
wait until morning

Beaver Trap



Jaws $3/8$ in. tempered steel rods.
Base bars $1/4$ by $1/4$ inch steel bars
Sides 1 inch mesh no. 20 wire.

Chains woven through male lock of jaws.
Weight 24 lbs.

Oct. 2 Traded Mielingamm
2 AM + walked out to camp.
Charles had taken 2 beavers
so we carried them in a
~~box~~ out to road and got
auto to take us to town & shipped
them, came back to camp
at Spence Lake and Charles
packed up and we carried his
outfit out to road and he
took 7 PM train home.
W. C. Chintock returned to
camp about dark.

Oct. 5 - W. C. Chintock left for
home and I shipped one
beaver to Le Roy.

Now all alone in camp
on border of Spence Lake.

Beautiful, mild, sunny
weather.

16

17

18

19

20 sun

21

Oct. 17 Began to rain early
in morning, rained all
day & night.

Oct. 18 Still raining.

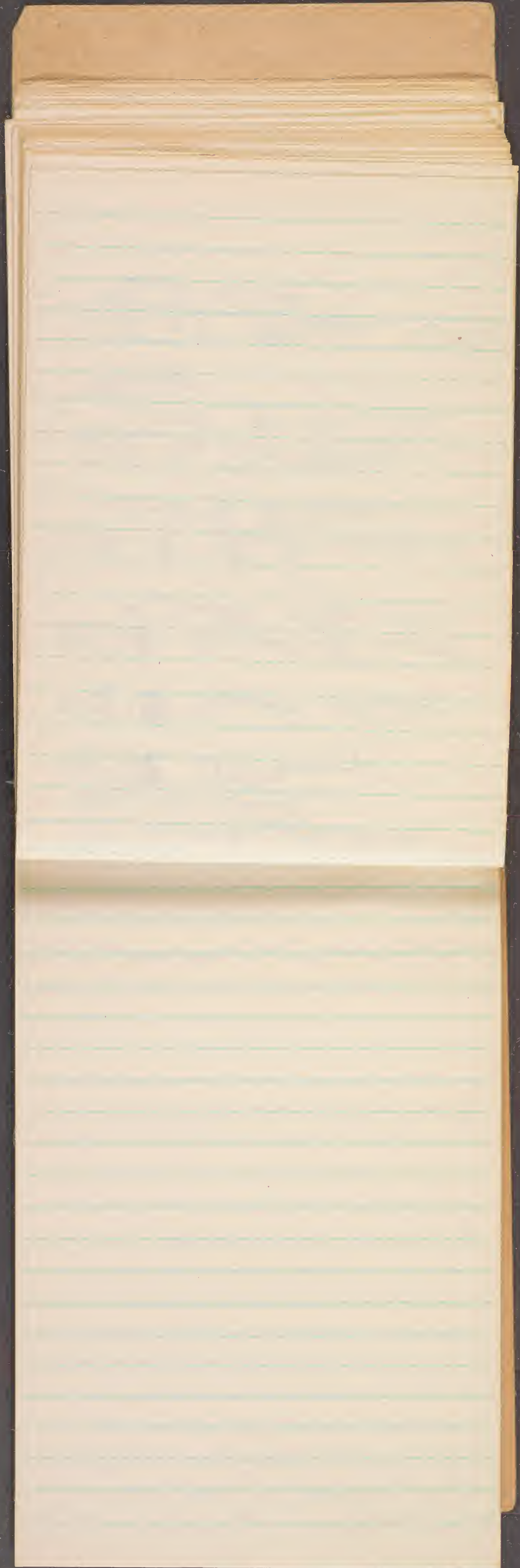
Oct 19, Snowed all day,

Oct. 20, Snowed all night
& until after noon.

Oct. 21, Breda camp &
moved to Michigan.

Oct. 22, Left Michigan
7 P.M. for home via
Chicago.

Oct. 23, Chicago, 7:30 AM
Left 1 P.M.



The first part of the paper discusses the general principles of the theory of the atom. It is shown that the atom is a system of particles which are bound together by forces of attraction. The forces of attraction are of two kinds, namely, the forces of cohesion and the forces of adhesion. The forces of cohesion are the forces which bind the particles of a substance together, and the forces of adhesion are the forces which bind the particles of one substance to the particles of another substance.

The forces of cohesion are of two kinds, namely, the forces of cohesion between the particles of a substance and the forces of cohesion between the particles of a substance and the particles of another substance. The forces of adhesion are of two kinds, namely, the forces of adhesion between the particles of one substance and the particles of another substance, and the forces of adhesion between the particles of one substance and the particles of a third substance.

The forces of cohesion and adhesion are of two kinds, namely, the forces of cohesion and adhesion between the particles of a substance and the particles of another substance, and the forces of cohesion and adhesion between the particles of one substance and the particles of a third substance.

The forces of cohesion and adhesion are of two kinds, namely, the forces of cohesion and adhesion between the particles of a substance and the particles of another substance, and the forces of cohesion and adhesion between the particles of one substance and the particles of a third substance.

The forces of cohesion and adhesion are of two kinds, namely, the forces of cohesion and adhesion between the particles of a substance and the particles of another substance, and the forces of cohesion and adhesion between the particles of one substance and the particles of a third substance.

The forces of cohesion and adhesion are of two kinds, namely, the forces of cohesion and adhesion between the particles of a substance and the particles of another substance, and the forces of cohesion and adhesion between the particles of one substance and the particles of a third substance.

UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF BIOLOGICAL SURVEY.
WASHINGTON.

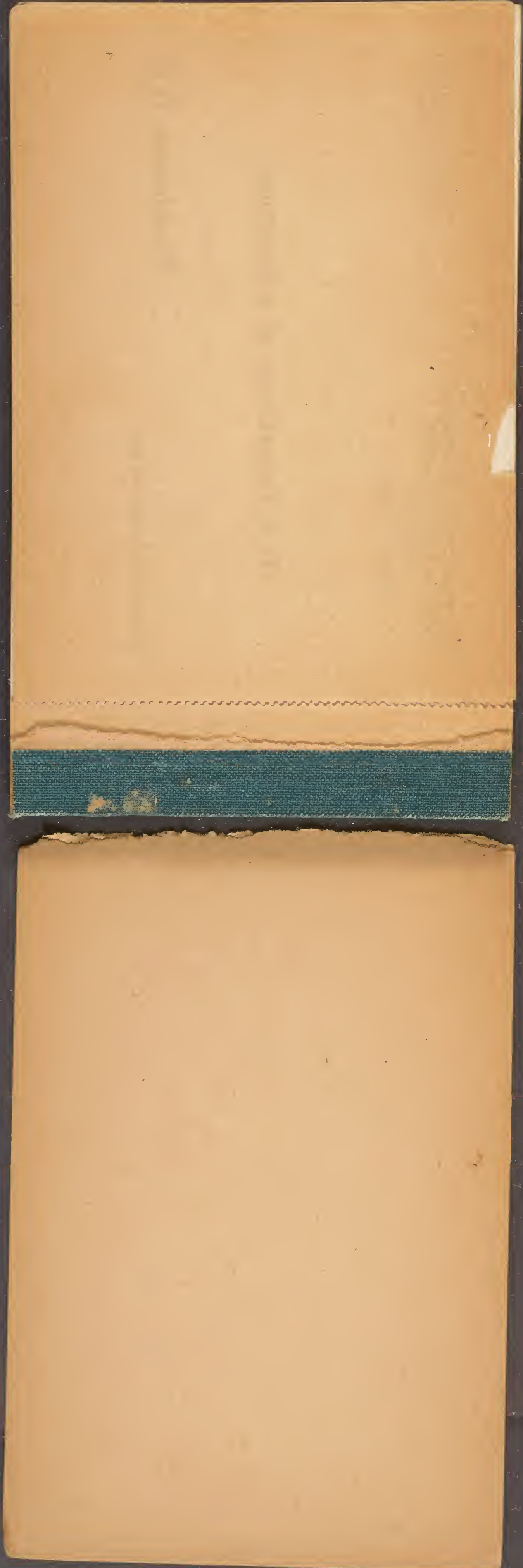
OFFICIAL BUSINESS.

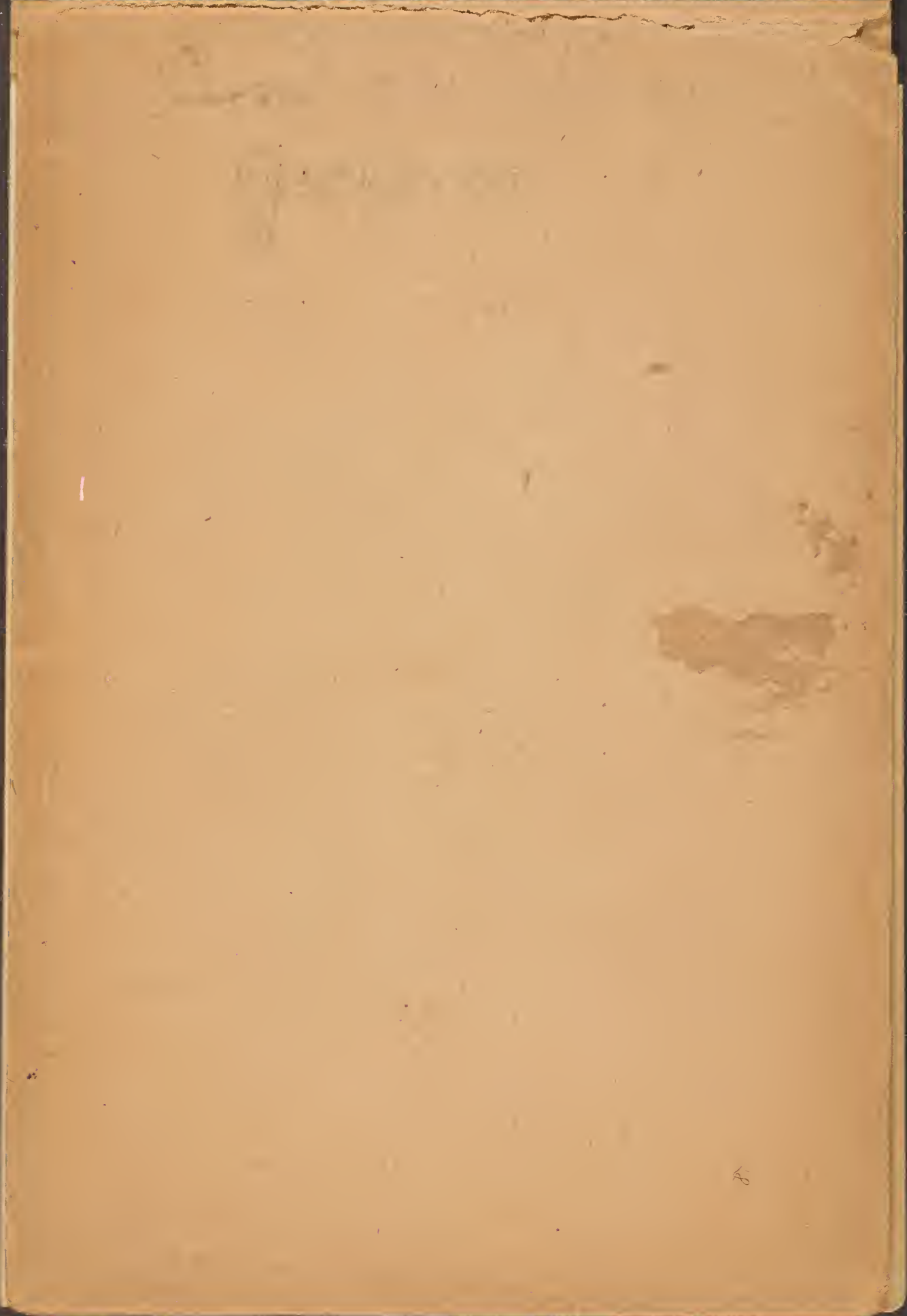
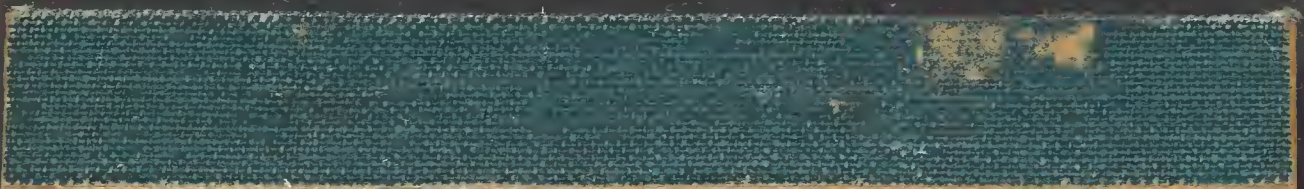
PENALTY FOR PRIVATE USE
TO AVOID PAYMENT OF
POSTAGE, \$300.

U. S. Department of Agriculture,

Washington, D. C.

Bureau of Biological Survey.





8

49 am

7 1/2 am

16 am

2/10

23 am

24 am

25 am

26 am



Flour - white & golden

Baking powder

Soda

Corn meal

Beans - kidney

Rice - brown
- whole or cracked wheat

Pea meal

Oatmeal - Pittsburg

Cream of wheat

Corn flakes

Grape nuts

Potatoes

Onions

Carrots

Lettuces

meat

Canned roast beef

Canned corn beef

Beacon

Eggs

Klim

Malted milk

Cocoa

Sugar

salt

Cavellis

lamp

lantern

Dried fruit

Pears

Prunes

apples

apricots

Peaches

Milk cream

Pails

Garbage can

Pans

Frying pans

Bake oven

Refrigerator

Boilers

MODERN BRICK BUILDING
WELL FURNISHED THROUGHOUT

HOT AND COLD WATER
BATH AND STEAM HEAT

THE HOTEL NEWBERRY

D. J. O'CONNELL, Manager

NEWBERRY, MICH., _____ 192_____

Weary of myself and sick of arbing
What I am and what I ought to be,
At this vessel's prow I stand which
Bears me forward, forward o'er the starlit sea.

And a cry of passionate desire
O'er the waters to the stars I send,
Ye who from my childhood up have
Calmed me, Calm me, Ah compass me to the end.

Once again, ye stars, ye waters
On my heart your mighty charm renew,
Still, still let me as I gaze upon you
Feel my soul becoming vast like you.

On the trembling night wind came the answer
From the ^{stars} ~~stars~~ ^{down} ~~down~~ ^{valet} ~~of~~ ^{of} ~~heaves~~ ^{heaves}
O'er the lit sea's untroubled way
Woulds thou be as those are, live as they
~~live as they~~

Unaffrighted by the silence round them,
Undimmed by all the sights they see
There requires not that the things about them
Yield them love, amusement, sympathy.

Mitchellivackias

in 1070 Pecc-Mamutte galled to Huron Lake
but he ^{at the mouth} of Mitchellivackias, but at
St. Ignace, when 3 years later he was buried.

But it was 100 years later before the
wattle trapping and hadley traps were
in their prime.

Johannes	Erasmus
Machius	Coling
Thommas	Wescola
Machius	
Socavata	Saginas
Machius	Shimmas
Mitchellivackias	Frederic
Saginas	Teinwald
Chubogon	Furcola
Machius	Machius
Machius	Forstie
Machius	Frederic
Reverem	
Antony	
Falavay	
Machius	
Oranney	

Flour - white, graham

Corn meal

Oatmeal

Potatoes

Wheat or grits

Rice

Beans

Peas or pea meal

Corn flakes

Grapenuts

Baking powder

Soda

Salt

Sugar

Klein & milk

Malted milk

Cocoa

Tea

Dried fruit

Bacon

Meat

Canned meat

Butter

Eggs

Potatoes

Vegetables, lettuce, carrots, onions

Syrup

Jam

Jello

Vinegar

Oil

Noodles

Swedish bread

Crackers

Bread

Pails

Pans

Garbage can

Bake oven

Frying pans

Reflectors

Broilers

Dishes

gumb box

Towels

Soap

Matches

Candles

Mosquito netting

THE HARRIS HOUSE

JOHN HUNT, PROPRIETOR

NEWBERRY, MICH., _____ 19____

- ✓ Meat, lamb, beef, bacon
- ✓ Butter, eggs
- ✓ Bread, brown & rye
- ✓ Swedish bread
- ✓ Crackers, oatmeal,
- ✓ Pettijohn
- ✓ Cream of wheat
- ✓ Triscuit
- ✓ Grape nuts
- ✓ Noodles
- ✓ Canned vegetable, but, beans, peas, string beans
- ✓ Canned meats,
- ✓ Eggs
- ✓ Jams, preserves, jello,
- ✓ Fruit, lettuce, cabbage, spinach
- ✓ Apple sauce, peaches, cherries
- ✓ Raisens
- ✓ Tomatoes
- ✓ Dried fruit - peaches, apples, apricots, prunes, raisens

Mrs. Ernest P Maud
220 E. Walton Place, Chicago.

- ✓ 2 slop pails
- ✓ 2 granite pails, 4 qts.
- ✓ 4 tin pans
- ✓ Kettles
- ✓ 2 baking pans for bread
- ✓ Pan for reflector
- Grate
- ✓ frying pan
- ✓ Nails, calking, ~~glue~~ ^{putty} lead + paint + oars + locks
- ✓ Parowax, linseed oil, 1 gal.
- ✓ 2 fly swatters 20
- ✓ Dish towel, mastic vint.
- ✓ 2 agate cups, 6 nest cups - 60¢
- ✓ 2 rolls toilet paper, 2 paper towels & napkins
- ✓ Tels naphtha soap
- ✓ Chloride of lime
- ✓ Boxes, board for boat
- Note books, time books
- ✓ Skuter skoot & Citronella .20