

# Anno Domini 1943

## January

S	M	T	W	T	F	S
..	..	..	..	..	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	..	..	..	..	..	..

## April

S	M	T	W	T	F	S
..	..	..	..	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	..
..	..	..	..	..	..	..

## July

S	M	T	W	T	F	S
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4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31
..	..	..	..	..	..	..

## October

S	M	T	W	T	F	S
..	..	..	..	..	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	..	..	..	..	..	..

## February

S	M	T	W	T	F	S
..	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	..	..	..	..	..	..
..	..	..	..	..	..	..

## May

S	M	T	W	T	F	S
..	..	..	..	..	..	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	..	..	..	..	..

## August

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	..	..	..	..
..	..	..	..	..	..	..

## November

S	M	T	W	T	F	S
..	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	..	..	..	..
..	..	..	..	..	..	..

## March

S	M	T	W	T	F	S
..	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	..	..	..
..	..	..	..	..	..	..

## June

S	M	T	W	T	F	S
..	..	..	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	..	..
..	..	..	..	..	..	..

## September

S	M	T	W	T	F	S
..	..	..	..	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	..
..	..	..	..	..	..	..

## December

S	M	T	W	T	F	S
..	..	..	..	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31
..	..	..	..	..	..	..

*The*  
BUSINESS  
YEAR BOOK



A Personal Chronicle  
For One Year

Richard W. Janson



1943



## Distances and Mail Time from New York to Cities in United States

Cities in United States	Miles	Time (hours)	Cities in United States	Miles	Time (hours)
Albany, N. Y.	145	3	Louisville, Ky.	865	22
Atlanta, Ga.	876	26	Memphis, Tenn.	1,158	36
Baltimore, Md.	187	5	Milwaukee, Wis.	994	25
Birmingham, Ala.	990	31	Nashville, Tenn.	998	28
Bismarck, N. Dak.	1,753	49	New Orleans, La.	1,345	41
Boston, Mass.	232	6	Ogden, Utah.	2,397	61
Buffalo, N. Y.	396	10	Oklahoma City, Okla.	1,596	42
Charleston, S. Car.	736	21	Omaha, Neb.	1,397	35
Cheyenne, Wyo.	1,913	46	Philadelphia, Pa.	92	2
Chicago, Ill.	909	21	Pittsburgh, Pa.	441	11
Cincinnati, Ohio.	751	18	Portland, Me.	341	11
Cleveland, Ohio.	579	14	Portland, Ore.	3,162	80
Dallas, Tex.	1,739	45	Raleigh, N. Car.	500	16
Denver, Colo.	1,943	57	Reno, Nev.	2,936	74
Des Moines, Ia.	1,267	33	Richmond, Va.	343	10
Detroit, Mich.	648	15	St. Louis, Mo.	1,053	25
El Paso, Tex.	2,298	66	St. Paul, Minn.	1,307	32
Hartford, Conn.	112	4	San Antonio, Tex.	1,916	54
Helena, Mont.	2,438	69	San Francisco, Cal.	3,180	83
Indianapolis, Ind.	812	19	Savannah, Ga.	845	25
Jacksonville, Fla.	982	29	Seattle, Wash.	3,107	80
Kansas City, Mo.	1,331	37	Spokane, Wash.	2,787	69
Key West, Fla.	1,504	54	Toledo, Ohio.	701	17
Little Rock, Ark.	1,291	35	Tucson, Ariz.	2,611	76
Los Angeles, Cal.	3,111	85	Washington, D. C.	227	6

## Distances and Mail Time to Foreign Cities from New York City

By Postal Route to—	Statute Miles	Days	By Postal Route to—	Statute Miles	Days
Adelaide, Australia	11,843	32	Istanbul, Turkey	5,809	22
Alexandria, Egypt	6,135	17	Lima, Peru	3,807	14
Amsterdam, Netherlands	4,043	11	Lisbon, Portugal	5,342	12
Antwerp, Belgium	4,015	11	Liverpool, England	3,707	10
Athens, Greece	5,432	18	London, England	3,964	9
Bagdad, Mesopotamia	14,229	42	Madrid, Spain	4,851	13
Belgrade, Yugoslavia	5,217	13	Manila, Philippine Islands	11,206	30
Berlin, Germany	4,597	12	Melbourne, Australia	11,253	31
Berne, Switzerland	4,349	12	Mexico City, Mexico	3,760	6
Bombay, British India	9,434	25	Natal, South Africa	11,974	30
Brussels, Belgium	4,137	11	Para, Brazil	3,392	15
Budapest, Hungary	4,965	13	Paris, France	3,946	10
Buenos Ayres, Argentina	6,914	18	Leningrad, Russia	5,639	18
Calcutta, British India	11,324	28	Quebec, Quebec	555	2
Cape Town, So. Africa	11,033	27	Rio de Janeiro, Brazil	5,493	13
Christiania, Norway	4,342	13	Rome, Italy	4,854	14
Colombo, Ceylon	9,932	30	St. John's, Newfoundland	628	3
Colon, Panama	2,273	7	Santiago, Chili	5,398	22
Copenhagen, Denmark	4,639	13	Shanghai, China	9,530	23
Dublin, Ireland	4,287	10	Singapore, Straits Set's	13,358	36
Glasgow, Scotland	3,656	10	Stockholm, Sweden	5,405	15
Havana, Cuba	1,560	3	Valparaiso, Chili	5,335	21
Hamburg, Germany	4,317	11	Vienna, Austria	4,795	14
Hong Kong, China	10,453	23	Vladivostok, Siberia	11,343	25
Honolulu, Hawaii	5,599	12	Yokohama, Japan	8,717	18

## Common Stains and How to Remove Them

Blood and meat juice. Use cold water; soap and cold water; or starch paste.

Bluing. Use boiling water.  
Chocolate and cocoa. Use borax and cold water; bleach if necessary.

Coffee and tea. (Clear.)—Use boiling water; bleach if necessary. (With cream.)—Use cold water, then boiling water; bleach if necessary.

Cream and milk. Use cold water, then soap and cold water.

Egg. Use cold water.

Fruit and fruit juices. Use boiling water; bleach if necessary.

Grass. Use cold water; soap and cold water; alcohol; or a bleaching agent.

Grease and oils. Use French chalk, blotting paper or other absorbent; or warm water and soap; or gasoline, benzine, or carbon tetrachloride.

Iodine. Use warm water and soap; alcohol; or ammonia.

Ink. Try cold water; then use an acid or bleach if necessary.

Iron. Use oxalic acid; hydrochloric acid; salts of lemon; or lemon juice and salt.

Kerosene. Use warm water and soap.

Lampblack and soot. Use kerosene, benzine, chloroform, ether, gasoline, or carbon tetrachloride.

Medicine. Use alcohol.

Mildew. If fresh, use cold water; otherwise try to bleach with javelle water or potassium permanganate.

Paint and varnish. Use alcohol, carbon tetrachloride, chloroform, or turpentine.

Perspiration. Use soap and warm water; bleach in the sun or with javelle water or potassium permanganate.

Pitch, tar, and wheel grease. Rub with fat; then use soap and warm water; or benzine, gasoline, or carbon tetrachloride.

Scorch. Bleach in the sunshine or with javelle water.

Shoe polish. (Black.)—Use soap and water; or turpentine. (Tan.)—Use alcohol.

Syrup. Use water.

Stove polish. Use cold water and soap; or kerosene, benzine, or gasoline.

Vaseline. Use kerosene or turpentine.

Water. Steam or sponge the entire surface of water-spotted materials.

Wax. Scrape off as much as possible. Use French chalk, blotting paper or other absorbent, with a warm iron; or use benzine or gasoline. If color remains, use alcohol or bleach.

## ACTUAL TIME IN USE IN THE LARGEST CITIES OF THE WORLD WHEN IT IS 12:00 NOON, WASHINGTON

Athens	7:00 P. M.	Melbourne	next day... 3:00 A. M.
Auckland next day	3:00 A. M.	Milwaukee	11:00 A. M.
Berlin	6:00 P. M.	Minneapolis	11:00 A. M.
Bombay	10:30 P. M.	Natal	7:00 P. M.
Boston	12:00 noon	New Orleans	11:00 A. M.
Buffalo	12:00 noon	New York	12:00 noon
Cape Town	7:00 P. M.	Omaha	11:00 A. M.
Chicago	11:00 A. M.	Ottawa	12:00 noon
Cincinnati	11:00 A. M.	Panama	12:00 noon
Cleveland	12:00 noon	Paris	5:00 P. M.
Constantinople	7:00 P. M.	Philad'pa	12:00 noon
Denver	10:00 A. M.	Pittsb'rg	12:00 noon
Detroit	12:00 noon	Portland	9:00 A. M.
Galveston	11:00 A. M.	Quebec	12:00 noon
Halifax	1:00 P. M.	Rio de J'n'ro	2:00 P. M.
Hamburg	6:00 P. M.	Rome	6:00 P. M.
Havana	11:31 A. M.	Salt L. City	10:00 A. M.
Hong Kong		San Francisco	9:00 A. M.
next day	1:00 A. M.	St. Louis	11:00 A. M.
Honolulu	6:30 A. M.	Seattle	9:00 A. M.
Jerusalem	7:00 P. M.	Suez	7:00 P. M.
Kansas City	11:00 A. M.	Toledo	12:00 noon
Lisbon	4:24 P. M.	Vancouver	9:00 A. M.
Liverpool	5:00 P. M.	Vienna	6:00 P. M.
London	5:00 P. M.	Winnipeg	11:00 A. M.
Madrid	5:00 P. M.	Yokohama	
Manila next day	1:00 A. M.	next day	2:00 A. M.

## RATES OF INTEREST IN ALL THE STATES

States and Territories	Legal Rate	Special Contract Rate	States and Territories	Legal Rate	Special Contract Rate
Alabama	8	8	Nebraska	7	10
Arkansas	6	10	Nevada	7	..
Arizona	6	12	N. Hamp.	6	6
California	7	..	N. Jersey	6	6
Colorado	8	..	N. Mexico	6	12
Conn.	6	6	New York	6	6
Delaware	6	6	N. Carolina	6	6
D. C.	6	10	N. Dakota	7	12
Florida	8	10	Ohio	6	8
Georgia	7	8	Oklahoma	6	12
Idaho	7	12	Oregon	6	10
Illinois	5	7	Penn.	6	6
Indiana	6	8	R. Island	6	..
Iowa	6	8	S. Carolina	7	8
Kansas	6	10	S. Dakota	7	12
Kentucky	6	6	Tennessee	6	6
Louisiana	5	8	Texas	6	10
Maine	6	..	Utah	8	12
Maryland	6	6	Vermont	6	6
Mass.	6	..	Virginia	6	6
Michigan	5	7	Wash.	6	12
Minnesota	6	10	W. Va.	6	6
Mississippi	6	10	Wisconsin	6	10
Missouri	6	8	Wyoming	8	12
Montana	8	..			



## Weights and Measures

### APOTHECARIES' WEIGHT

20 grains...	1 scruple	8 drams...	1 ounce
3 scruples...	1 dram	12 ounces...	1 pound

Ounce and pound are the same as in Troy Weight.

### AVOIRDUPOIS WEIGHT

27 $\frac{1}{2}$ grains...	1 dram	25 pounds...	1 quarter
16 drams...	1 ounce	4 quarters...	1 cwt.
16 ounces...	1 pound	2,000 lbs...	1 short ton
2,240 pounds...			1 long ton

### TROY WEIGHT

24 grains...	1 pwt.
20 pwt...	1 ounce
Used for weighing gold, silver and jewels.	

### CLOTH MEASURE

2 $\frac{1}{4}$ inches...	1 nail	4 nails...	1 quarter
4 quarters...			1 yard

### CUBIC MEASURE

1.728 cubic inches...	1 cubic foot
27 cubic feet...	1 cubic yard
128 cubic feet...	1 cord (wood)
40 cubic feet...	1 ton (shipping)
2,150.42 cubic inches...	1 standard bushel
231 cubic inches...	1 U. S. standard gallon
1 cubic foot...	about 4/5 of a bushel

### DRY MEASURE

2 pints...	1 quart	4 pecks...	1 bushel
8 quarts...	1 peck	36 bushels...	1 chaldron

### LIQUID MEASURE

4 gills...	1 pint	4 quarts...	1 gallon
2 pints...	1 quart	31 $\frac{1}{2}$ gals...	1 barrel
2 barrels...			1 hogshead

### LONG MEASURE

12 inches...	1 foot	40 rods...	1 furlong
3 feet...	1 yard	8 furlongs...	1 sta. mile
5 $\frac{1}{2}$ yards...	1 rod	3 miles...	1 league

### MARINERS' MEASURE

6 feet = 1 fathom.	120 fathoms = 1 cable length
7 $\frac{1}{2}$ cable lengths...	1 mile
5,280 feet...	1 statute mile
6,085 feet...	1 nautical mile

### PAPER MEASURE

24 sheets, 1 quire.	20 quires, 1 ream (480 sheets)
2 reams...	1 bundle 5 bundles... 1 bale

### SQUARE MEASURE

144 sq. in.	1 sq. ft.	40 sq. rods.	1 rood
9 sq. ft...	1 sq. yard	4 roods...	1 acre
30 $\frac{1}{4}$ sq. yds.	1 sq. rod	640 acres...	1 sq. mile

### SURVEYORS' MEASURE

7.92 inches...	1 link
25 links...	1 rod
4 rods...	1 chain
10 sq. chains or 160 sq. rods...	1 acre
640 acres...	1 sq. mile
36 sq. miles (6 miles sq.)...	1 township

### TIME MEASURE

60 seconds = 1 minute.	60 minutes = 1 hour
24 hours = 1 day.	7 days = 1 week
28, 29, 30 or 31 days...	1 calendar month
30 days = 1 month.	in computing interest
365 days = 1 year.	366 days = 1 leap year

### MISCELLANEOUS

3 inches = 1 palm.	4 inches = 1 hand
6 inches = 1 span.	18 inches = 1 cubit
21.8 inches...	1 Bible cubit
2 $\frac{1}{2}$ cct.	1 military pace

### METRIC EQUIVALENTS—Linear Measure

1 centimeter...	0.3937 inch
1 inch...	2.54 centimeters
1 decimeter...	3.937 inches
1 foot...	0.328 meter
1 meter...	39.37 inches
1 yard...	0.9144 meter
1 dekameter...	1.9884 rods
1 rod...	0.5029 dekameter
1 kilometer...	0.62137 mile
1 mile...	1.6093 kilometers

### Square Measure

1 square centimeter...	0.1550 square inch
1 square inch...	6.452 square centimeters
1 square decimeter...	0.1076 square foot
1 square foot...	9.2903 square decimeters
1 square meter...	1.196 square yards
1 square yard...	0.8361 square meter
1 acre...	3.954 square rods
1 square rod...	0.2529 acre
1 hectare...	2.47 acres
1 acre...	0.4047 hectare
1 square kilometer...	0.386 square mile
1 square mile...	2.59 square kilometers

### Measure of Volume

1 cubic centimeter...	0.061 cubic inch
1 cubic inch...	16.39 cubic centimeters
1 cubic decimeter...	0.0353 cubic foot
1 cubic foot...	28.317 cubic decimeters
1 cubic meter...	1.308 cubic yards
1 cubic yard...	0.7646 cubic meter
1 stere...	0.2759 cord
1 cord...	3.624 steres
1 liter = 0.908 quart dry.	1.0567 quarts liquid
1 quart dry...	1.101 liters
1 quart liquid...	0.9463 liter
1 dekaliter = 2.6417 gallons.	135 pecks
1 gallon...	0.3785 dekaliter
1 peck...	0.881 dekaliter
1 hektoliter...	2.8375 bushels
1 bushel...	0.3524 hektoliter

### Weights

1 gram...	0.03527 ounce
1 ounce...	28.35 grams
1 kilogram...	2.2046 pounds
1 pound...	0.4536 kilogram
1 metric ton...	1.1023 English tons
1 English ton...	0.9072 metric ton

### APPROXIMATE METRIC EQUIVALENTS

1 decimeter...	4 inches
1 liter...	1.06 quarts liquid, 0.9 quart dry
1 meter...	1.1 yards
1 kilometer...	$\frac{5}{8}$ of a mile
1 hektoliter...	2 $\frac{3}{4}$ bushels
1 hectare...	2 $\frac{3}{4}$ acres
1 kilogram...	2-1/5 pounds
1 stere, or cubic meter...	$\frac{3}{4}$ of a cord
1 metric ton...	2,200 pounds

### TEMPERATURES

	Fahrenheit
Milk...	Freezes 30° above Zero
Water...	Freezes 32° above Zero
Olive Oil...	Freezes 36° above Zero
Wines...	Freezes 20° above Zero
Vinegar...	Freezes 28° above Zero
Alcohol...	Boils at 173° above Zero
Water...	Boils at 212° above Zero
Petroleum (average)...	Boils at 306° above Zero
Blood Heat...	98.4° above Zero
Eggs Hatch...	104° above Zero

## Explanation of Weather Bureau Flag Signals

<b>No. 1</b> White	<b>No. 2</b> Blue
	
Clear or Fair	Rain or Snow
<b>No. 3</b> White and Blue	<b>No. 4</b> Black Triangular
	
Local Rains	Temperature
<b>No. 5</b> White Black Center	
	
Cold Wave	

### STORM SIGNAL



Red, Black Center

### EASTERLY WINDS



Red

### WESTERLY WINDS



White

- No. 1, alone, indicates fair weather, stationary temperature.
- No. 2, alone, indicates rain or snow, stationary temperature.
- No. 3, alone, indicates local rain, stationary temperature.
- No. 1, with No. 4 above it, indicates fair weather, warmer.
- No. 1, with No. 4 below it, indicates fair weather, colder.
- No. 2, with No. 4 above it, indicates warmer weather, rain or snow.
- No. 2, with No. 4 below it, indicates colder weather, rain or snow.
- No. 3, with No. 4 above it, indicates warmer weather with local rains.
- No. 3, with No. 4 below it, indicates colder weather with local rains.
- No. 1, with No. 5 above it, indicates fair weather, cold wave.
- No. 2, with No. 5 above it, indicates wet weather, cold wave. Forecasts made at 10 A. M. and displayed between 12 and 1 P. M. forecast the weather for the following day until 8 P. M.

### WIND DIRECTION AND STORM SIGNALS

#### In use on the Coast and the Great Lake Ports

Cautionary against a wind velocity that will be dangerous to all classes of vessels, that is when a velocity of thirty miles per hour or over is expected.

The Red Pennant hoisted above Storm Signal indicates winds will be from the N. E. When Red Pennant is below Storm Signal it indicates winds from the S. E.

The White Pennant hoisted above Storm Signal indicates winds will be from the N. W. When White Pennant is below Storm Signal, it indicates winds from the S. W.

At night a Red Light will indicate Easterly winds, and a Red and White Light Westerly winds.

## Weather Wisdom

**Sunset Colors:** A gray, lowering sunset, or one where the sky is green or yellowish-green, indicates rain. A red sunrise with clouds lowering later in the morning, also indicates rain.

**Sky Color:** A deep blue color of the sky, even when seen through clouds, indicates fair weather; a glowing whiteness an approaching storm.

**Visibility:** Unusual clearness of the atmosphere, unusual brightness or twinkling of the stars indicate rain.

**Fogs:** Fogs indicate settled weather. A morning fog usually breaks away before noon.

**Frost:** The first frost and the last frost are usually preceded by a temperature very much above the mean.

**Halo (Sun Dogs):** By halo we mean the large circles, or part of circles, about the sun or moon. A halo occurring after fine weather indicates a storm.

**Corona:** By this term we mean the small colored circles frequently seen around the sun or moon. A corona growing smaller indicates rain; growing larger, fair weather.

**Rainbows:** A morning rainbow is regarded as a sign of rain; an evening rainbow of fair weather.







## Legal Holidays in the Various States

JANUARY 1. NEW YEAR'S DAY: In all the States, Territories and Colonial possessions.

JANUARY 8. ANNIVERSARY OF THE BATTLE OF NEW ORLEANS: In Louisiana.

JANUARY 19. LEE'S BIRTHDAY: In Ala., Ark., Fla., Ga., Miss., N. C., S. C., Tenn. and Va.

FEBRUARY 12. GEORGIA DAY: In Georgia. Date of Oglethorpe's landing in 1733.

FEBRUARY 12. LINCOLN'S BIRTHDAY: In Alaska, Calif., Colo., Conn., Del., Ia., Ill., Ind., Kan., Ky., Mich., Minn., Mo., Mont., Neb., Nev., N. J., N. Y., N. Dak., Ohio, Pa., S. Dak., Tenn., Utah, Wash., W. Va., Wyo., and observed by Governor's Proclamation in Mass.

FEBRUARY 14. ADMISSION DAY: In Arizona.

FEBRUARY 22. WASHINGTON'S BIRTHDAY: In all the States, Territories and Possessions.

MARCH 2. ANNIVERSARY OF TEXAN INDEPENDENCE: In Texas.

MARCH 4. INAUGURATION DAY: Every four years in the Dist of Columbia only.

MARCH 25. MARYLAND DAY: In that State only.

MARCH 30. SEWARD DAY: In Alaska.

GOOD FRIDAY: In Conn., Del., Fla., La., Md., Minn., N. J., Pa., Philippines, Porto Rico, Tenn.

APRIL 12. HALIFAX INDEPENDENCE RESOLUTIONS: In North Carolina.

APRIL 13. THOMAS JEFFERSON'S BIRTHDAY: In Alabama.

APRIL 19. PATRIOTS' DAY: In Me. and Mass.

APRIL 21. ANNIVERSARY OF THE BATTLE OF SAN JACINTO: In Texas.

APRIL 26. CONFEDERATE MEMORIAL DAY: In Alabama, Florida, Georgia and Mississippi.

MAY 10. CONFEDERATE MEMORIAL DAY: In Kentucky and North Carolina.

MAY (Second Sunday). MOTHER'S DAY: Is observed but not a legal holiday.

MAY 20. ANNIVERSARY OF THE SIGNING OF THE MECKLENBURG DECLARATION OF INDEPENDENCE: In North Carolina.

MAY 30. DECORATION DAY: In all the States and Possessions except Ala., Ark., Fla., Ga., La., Miss., N. Mex., N. C., S. C., Tenn. and Texas.

JUNE 3. JEFFERSON DAVIS'S BIRTHDAY: In Ala., Ark., Fla., Ga., Ky., La., Miss., Tenn., Tex. and Va.

JUNE 11. KAMEHAMEHA DAY: In Hawaii.

JUNE 14. FLAG DAY: Is widely observed but not a legal holiday.

JUNE 15. PIONEER DAY: In Idaho.

JULY 4. INDEPENDENCE DAY: In all the States, Territories and Possessions.

JULY 10. ADMISSION DAY: In Wyoming.

JULY 24. PIONEERS' DAY: In Utah.

AUGUST 1. COLORADO DAY: In Colorado.

AUGUST 16. BENNINGTON BATTLE DAY: In Vt.

SEPTEMBER (First Monday). LABOR DAY: In all the States and Territories except Ala., Wyo. and the Philippines.

SEPTEMBER 6. LAFAYETTE DAY: Also the anniversary of the First Battle of the Marne. Is not a legal holiday, but is celebrated in New York and ten other States.

SEPTEMBER 9. ADMISSION DAY: In California.

SEPTEMBER 12. "OLD DEFENDERS' DAY": In Baltimore, Md.

OCTOBER 1. MISSOURI DAY: In that State's schools.

OCTOBER 12. COLUMBUS DAY: In Ark., Ariz., Calif., Colo., Conn., Del., Fla., Idaho, Ill., Ind., Kan., Ky., La., Me., Md., Mass., Mich., Mo., Mont., Neb., Nev., N. H., N. J., N. M., N. Y., N. Dak., Ohio, Ore., Pa., R. I., Tex., Utah, Vt., Wash., W. Va., also in Porto Rico. In Arkansas and Kansas it does not affect notes or judicial proceedings.

OCTOBER 12. FRATERNAL DAY: Alabama only.

OCTOBER 18. ALASKA DAY: In Alaska only.

OCTOBER 31. ADMISSION DAY: In Nevada.

NOVEMBER. GENERAL ELECTION DAY: 1st Tuesday after 1st Monday. In every State and Territory except Alaska, Dist. of Col., Hawaii, Ill., Mass., Miss., Ohio, Philippines and Vt. In Illinois it is a legal holiday in Chicago, Springfield, East St. Louis, Galesburg, Danville, Cairo and Rockford. In Ohio it is a half holiday. In Maine it is a legal holiday only as to the courts, which also close on the State Election Day (biennially, 2nd Monday in Sept.).

NOV. 11. ARMISTICE DAY: In Ala., Ariz., Ark., Calif., Colo., Fla., Ill., Iowa, La., Mass., Minn., Mo., Mont., Neb., N. J., N. C., N. Dak., Pa., R. I., S. Dak., Tenn., Tex., Vt., Va. and Hawaii. In other States by Governor's Proclamation only.

NOVEMBER. THANKSGIVING DAY: Last Thursday in November. It is observed in all the States, although in some it is not a statutory holiday.

DECEMBER 25. CHRISTMAS DAY: In all the States, Territories and Possessions.

DECEMBER 30. RIZAL DAY: In Philippines.

There are no statutory holidays in Mississippi, but by common consent the Fourth of July, Thanksgiving and Christmas are observed. In New Mexico, Washington's Birthday, Decoration Day, Labor Day, Flag Day (June 14), and Arbor Day are holidays, when so designated by the Governor. In South Carolina, Thursday of Fair Week is a legal holiday.

ARBOR DAY is a legal holiday in many States, although in some it is observed as designated by the Governor.

Friday, January 1, 1943

1st Day—364 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## CHEMISTRY..

Three physical states of matter  
solid, liquid, gas

Chem. divisions of matter

Element, compound, mixture

Division of elements

Metal <sup>ends in</sup> um. Non-metals ine

Division of compounds

Acids, bases, salts.

Number of elements

92

Most abundant element in earth's crust

Oxygen

Saturday, January 2, 1943

2nd Day—363 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Most abundant element in air.  
Nitrogen

Percentage composition of air

Oxygen 21 ; Nitrogen 78

What symbol stands for.

Abbreviation, name of element,

One atom, weight of one atom

What formulas stand for.

Stands for compound, formulae  
weight, tells what ele. are  
in comp., ratio in which they  
combine.

Equation

Shows a chemical change,  
how things react with each  
other.

Sunday, January 3, 1943

3rd Day—362 days to follow

"..... Consider the lilies of  
the field, how they grow;  
they toil not, neither do  
they spin:  
"And yet I say unto  
you, That even Solomon in  
all his glory was not  
arrayed like one of these."

Matthew 6: 28, 29

Monday, January 4, 1943

4th Day—361 days to follow

CLEAR
CLOUDY
RAIN
SNOW

chemical change

Composition altered, loses  
and gains electrons.

Physical change

Elements involved can  
be separated by mech-  
anical means.

Forms of energy changes

Heat, light, electrical, mech.

Two kinds of heat

Exothermic - gives off

Endothermic - takes on

What is air? Prove.

Mixture. Liquify it.  
Composition varies.

Tuesday, January 5, 1943

5th Day—360 days to follow

CLEAR
CLOUDY
RAIN
SNOW

What is the  $\text{CO}_2$  cycle

Animals breathe it out plants breathe it in.

Humidity - amount of water in air;  
Ideal humidity - 40%; Rel. hum. - amount in air compared to what it can hold; Abs. hum. - as much as air can hold

Helium - used in dirigibles; neon - used in elec. signs; argon - used in lights

Atoms

Smallest part of an element

Molecules

Made up of atoms combined in definite ratio by weight.

Sunday, January 3, 1943

1st Day—362 days to follow

Consider the lilies of

the field, how they grow;

they toil not, neither do

they spin.

And yet I say unto

you that even Solomon in

his glory was not

like one of these

flowers

Wednesday, January 6, 1943

6th Day—359 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Four parts of molecular theory

1. Atoms are exceedingly small
2. Molecules are in constant motion.
3. The space between them can be altered by heat and pressure.
4. Like compounds have like molecules.

Priestly disc. O. ~ Lavoisier named it

How oxygen is prepared  
heating  $\text{HgO}$ , electrolysis of water, liquifying of air.

O atomic weight 16. Colorless, odorless, tasteless, will not burn, supports combustion, gas, slightly soluble. Molecular wgt. 32, air 29.

Burning

Gives off heat + light; takes on oxygen; loss of elec. gain in val.

Oxidation

De-oxidation

loses oxygen; gain of elec. loss of val.

Bauxite

Zinc

Manganese

Nickel

Chromite

Tungsten

Potash

Phosphates

Thursday, January 7, 1943

7th Day—358 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Uses of oxygen.

Purifies water, animals breathe it, oxygen tents, welding, bleaching agent.

Catalyst - substance used to speed up a reaction.

Allotropic - different forms of same element ( $O_2$ ,  $O_3$ ).Ozone - 3 atoms to a molecule  $O_3$ , caused by electricity. Has odor. Blueish in color.

- 3 essentials before burning can take place.
1. Something that will burn
  2. Region that will support combust.
  3. Must reach its kindling temp.

Law of conservation of matter and Energy: Matter and energy can neither be created nor destroyed.

Friday, January 8, 1943

8th Day—357 days to follow

CLEAR
CLOUDY
RAIN
SNOW

BROOKS EMENY has identified nineteen minerals and three agricultural products as of PARAMOUNT IMPORTANCE in WAR. They are:

Coal  
 Iron ore  
 Petroleum  
 Copper  
 Lead  
 Nitrates  
 Sulphur  
 Bauxite  
 Zinc  
 Manganese  
 Nickel  
 Chromite  
 Tungsten  
 Potash  
 Phosphates

OVER →

Saturday, January 9, 1943

9th Day—356 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Antimony  
Tin  
Mercury  
Mica

\* \* \* \*

Cotton  
Rubber  
Wool

Sunday, January 10, 1943

10th Day—355 days to follow

"The heavens declare the glory of  
God; and the firmament  
sheweth his handywork."

Psalm 19:1

Monday, January 11, 1943

11th Day—354 days to follow

CLEAR
CLOUDY
RAIN
SNOW

MINERAL & TIMBER RESERVE	TOTAL	OUT	PERCENTAGE
IRON	000,000,000,000	000,000,000,000	100%
COPPER	000,000,000,000	000,000,000,000	100%
LEAD	000,000,000,000	000,000,000,000	100%
ZINC	000,000,000,000	000,000,000,000	100%
GOLD	000,000,000,000	000,000,000,000	100%
OIL	000,000,000,000	000,000,000,000	100%
COAL, ANTHRACITE	000,000,000,000	000,000,000,000	100%
COAL, BITUMINOUS	000,000,000,000	000,000,000,000	100%
SAW, TIMBER	000,000,000,000	000,000,000,000	100%

Tuesday, January 12, 1943

12th Day—353 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## MINERAL &amp; TIMBER RESERVES

## OF THE UNITED STATES

ITEM	UNIT	ESTIMATED ORIGINAL RESERVE	ESTIMATED PRESENT RESERVE	TAKEN OUT	PERCENTAGE EXHAUSTED
IRON	Tons	7,000,000,000	5,000,000,000	2,000,000,000	28
COPPER	Tons	44,000,000	21,000,000	23,000,000	52
LEAD	Tons	30,000,000	10,000,000	20,000,000	66
ZINC	Tons	26,000,000	11,000,000	15,000,000	58
GOLD	Ounces	250,000,000	50,000,000	200,000,000	80
OIL	Barrels	29,000,000,000	13,000,000,000	16,000,000,000	55
COAL, ANTHRACITE	1,000 tons	22,000,000	17,000,000	5,000,000	23
COAL, BITUMINOUS	1,000 tons	2,230,000,000	2,230,000,000	20,000,000	1
SAW TIMBER	1,000 board feet	7,000,000,000	1,700,000,000	NET LOSS 5,300,000,000	76

Wednesday, January 13, 1943

13th Day—352 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Thursday, January 14, 1943

14th Day—351 days to follow

CLEAR
CLOUDY
RAIN
SNOW

### THE TIME ELEMENTS IN THE REPLACEMENT OF RESOURCES

- GRASS;** Sometimes within a year. In the dust bowl not for many years.
- FOREST;** From 20 - 200 years depending on species planted.
- WATERS;** Artesian basins may sometimes be refilled in a few years if pumping stops but most basins, lakes, ponds, and rivers must wait for the forest cycle.
- SOILS;** Replacement by natural means requires centuries to thousands of years.
- METALS;** Once mined they can never be replaced, but by remelting scrap

→

Friday, January 15, 1943

15th Day—350 days to follow

CLEAR
CLOUDY
RAIN
SNOW

metal their useful life can be prolonged.

**FUELS;** Coal, oil, gas, peat. Once used they are gone forever as man measures time. Geologic processes might conceivably replace them.

**WILDLIFE;** An extinct animal like the passenger pigeon can never be replaced by either geology or biology.

13 Sparrow hawk  
14 Cooper's hawk  
15 Blue jay  
Flicker

Saturday, January 16, 1943

16th Day—349 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## OXYGEN -----

Trees ----- 49.5 % ○  
 Sand ----- 52.5 % ○  
 Water ----- 89.0 % ○  
 Air ----- 21.0 % ○

Sunday, January 17, 1943

17th Day—348 days to follow

"Let the words of my mouth  
 and the meditation of my heart  
 be acceptable in thy sight,  
 O, Lord, my strength, and  
 my Redeemer."

Monday, January 18, 1943

18th Day—347 days to follow

CLEAR
CLOUDY
RAIN
SNOW

WINTER LANDBIRDS OF  
NORTHEASTERN UNITED STATES

Containing all the commoner (and some of the rarer) winter land birds of northeastern United States.

## PERMANENT RESIDENT SPECIES

or those which are with us throughout the year.

- 1 Bob-white
- 2 Ruffed grouse
- 3 Red-shouldered hawk
- 4 Red-tailed hawk
- 5 Sparrow hawk
- 6 Cooper's hawk
- 7 Sharp-shinned hawk
- 8 Screech owl
- 9 Barred owl
- 10 Great horned owl
- 11 Long-eared owl
- 12 Short-eared owl
- 13 Crow
- 14 Blue jay
- 15 Flicker



Tuesday, January 19, 1943

19th Day—346 days to follow

CLEAR
CLOUDY
RAIN
SNOW

- 16 Meadowlark
- 17 Starling
- 18 Downy woodpecker
- 19 Hairy woodpecker
- 20 English sparrow
- 21 Purple finch
- 22 Song sparrow
- 23 Goldfinch
- 24 Chickadee
- 25 White-breasted nuthatch
- 26 Cedar Waxwing

## WINTER VISITANT SPECIES

or those which come from the north in the fall and remain until Spring.

1. Saw-whet owl
2. Prairie horned lark
3. Junco
4. Tree sparrow

Wednesday, January 20, 1943

20th Day—345 days to follow

CLEAR
CLOUDY
RAIN
SNOW

5. White-throated sparrow
6. Redpoll
7. Red crossbill
8. White-winged crossbill
9. Pine Grosbeak
10. Siskin
11. Northern shrike
12. Snow bunting
13. Winter wren
14. Brown creeper
15. Red-breasted nuthatch
16. Golden-crowned kinglet

Thursday, January 21, 1943

21st Day—344 days to follow

<input checked="" type="checkbox"/>	CLEAR
<input type="checkbox"/>	CLOUDY
<input type="checkbox"/>	RAIN
<input type="checkbox"/>	SNOW

## NORTH AMERICAN BIRDS

## EXTINCT

Passenger pigeon  
 Great auk  
 Labrador duck  
 Heath hen  
 Guadalupe caracara  
 Guadalupe towhee  
 Guadalupe rock wren

## THREATENED

Eskimo curlew  
 Carolina parakeet  
 Sharp-tailed grouse  
 Swallow-tailed kite  
 Butterball duck  
 Upland plover  
 Golden plover  
 Buff-breasted sandpiper

→

Friday, January 22, 1943

22nd Day—343 days to follow

<input type="checkbox"/>	CLEAR
<input type="checkbox"/>	CLOUDY
<input type="checkbox"/>	RAIN
<input type="checkbox"/>	SNOW

Woodcock  
 Whooping crane  
 Great white heron  
 Atwater prairie chicken  
 Masked bobwhite  
 California vulture  
 Red-bellied hawk  
 Everglade kite  
 Cape Sable sparrow  
 Bachman warbler  
 Dusky kinglet  
 Flamingo  
 Roseate spoonbill  
 Trumpeter swan  
 Harlequin duck  
 Redhead duck  
 Ringneck duck  
 Lesser scaup

Saturday, January 23, 1943

23rd Day—342 days to follow

CLEAR
CLOUDY
RAIN
SNOW

I.

## GEOLOGY.

Geology is the science which treats of the past conditions of the earth and of its inhabitants.

Its three great divisions are outlined on the next page.

→

Sunday, January 24, 1943

24th Day—341 days to follow

4. "Wealth maketh many friends; but the poor is separated from his neighbor."

Proverbs; Chap. 19

①

→

Monday, January 25, 1943

25th Day—340 days to follow

CLEAR
CLOUDY
RAIN
SNOW

II.

## GEOLOGY

I. Dynamical Geology  
Causes and processes now in operation about us everywhere producing structure.

II. Structural Geology  
Study of rocky structure of earth to as great a depth as possible interpreting structure by facts learned through dynamical geology

III. Historical Geology  
Study of the history of the earth's changes revealed in structure.

②

To pg. 27. →

Tuesday, January 26, 1943

26th Day—339 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## NORTH AMERICAN MAMMALS

## EXTINCT

Maine giant mink  
 California grizzly bear  
 Tejon grizzly bear  
 Texas grizzly bear  
 Plains grizzly bear  
 Gull Island meadow mouse  
 Pacific white-tailed deer  
 Merriam elk  
 Badlands mountain sheep  
 Texas mountain sheep

## THREATENED

White mountain dwarf shrew  
 Spotted bat  
 Glacier bear  
 Arizona grizzly bear  
 Black-footed ferret  
 Wolverine

→

Wednesday, January 27, 1943

27th Day—338 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Sea otter  
 Kit fox  
 Plains wolf  
 Guadalupe fur seal  
 Gray whale  
 Atlantic right whale  
 Greenland right whale  
 Monk seal  
 Hooded seal  
 Pacific walrus  
 Atlantic walrus  
 Eastern fox squirrel  
 Peninsula fox squirrel  
 San Joaquin kangaroo rat  
 Beach meadow mouse  
 Key deer  
 Button willow elk  
 Nelson mountain sheep  
 Sierra mountain sheep  
 Florida manatee

Thursday, January 28, 1943

28th Day—337 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## THE CROCODYLIANS

There are about 20 different species in the family crocodylidae, nine of which can be found in the Americas and seven of these nine are limited to Central or South America, leaving two which can be found in the United States one of which is an alligator the other a crocodile.

The range of the American Crocodile is limited to extreme southern Florida and possibly Texas while the American alligator is found in rivers and swamps along the Atlantic lowlands from

→

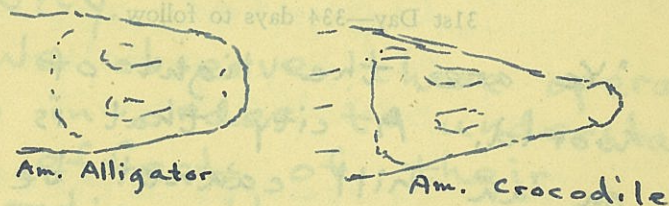
Friday, January 29, 1943

29th Day—336 days to follow

CLEAR
CLOUDY
RAIN
SNOW

North Carolina south through Florida and along the Gulf to the Rio Grande in Texas

To the average person the most apparent difference between the two species is the shape of the head the crocodiles being long and coming to a point at the snout while in the alligator it is broader and more rounded.



Alligators lay their eggs in June in a pile of debris, (leaves, etc.) in a so-

→

Saturday, January 30, 1943

30th Day—335 days to follow

CLEAR
CLOUDY
RAIN
SNOW

called nest while crocodiles lay their eggs in a hole in the sand. About 30-40 three inch oval shaped eggs are laid which hatch in about eight weeks. The eggs have a hard white shell. At birth the alligators are about 8 inches in length (growing about a foot a year) and begin to shift for themselves.

Sunday, January 31, 1943

31st Day—334 days to follow

14. "Ye are the light of the world. A city that is set on an hill cannot be hid."

St. Matthew, Chap. 5.

Special Data

III.

### I. DYNAMICAL GEOLOGY (Treated under four heads)

- A. Atmospheric
- B. Aqueous
- C. Organic
- D. Igneous

These same agencies have operated from the beginning though probably with different degrees of activity.

We observe these operations now in order to understand the effects of their operation then.

Their accumulated effect, through inconceivable ages, is the present structure of the earth.

(3)

IV

A. Atmospheric agencies

All things that we see, even the most enduring - hills, mountains, rocks, etc. - have become what they are usually by a slow process.

All soil is formed by a disintegration or rotting down of rock.

1. Sometimes remains where formed
2. Sometimes, through erosion fills up the valleys
3. Sometimes carried by streams and deposited as sediment - building up deltas and new land.

Two processes effect our study here:

- a. soil formation
- b. soil removal

SPARROWS

OF STARK COUNTY, OHIO

CLEAR
CLOUDY
RAIN
SNOW

Fourteen species of sparrows have been recorded in Stark County according to the bulletin published by the Neo Naturalists Society "Birds of Stark County, Ohio" (compiled by D. R. Pratt).

ABBREVIATIONS

- N nesting in Stark Co.  
 W recorded in winter Dec. 15 - Feb 15  
 B banded in Stark Co.

- PR permanent resident thruout year  
 SN summer resident nesting in Co.  
 SV summer visitor not nesting in Co.  
 WV winter visitor in Stark Co.  
 T transient passing thru Stark Co.

1. accidental or casual
  2. rare or very rare
  3. common or moderately common
  4. very common or abundant
- (An intermediate step is indicated thus: 1-2, 2-3, 3-4.)

Tuesday, February 2, 1943

33rd Day—332 days to follow

CLEAR
CLOUDY
RAIN
SNOW

The sparrows will be listed in the average order of arrival, which of course varies from year to year. If the bird is transient and passes through Stark Co. two times in one year it will be listed with the statistics concerning it on its <sup>average</sup> spring arrival but a special note will be inserted where it would normally appear in the fall.

## EXAMPLES:

Eastern tree sparrow

9/25/10	10/10	4/23	5/6/40
earliest spring fall arrival	average fall arrival	average spring departure	latest spring departure

Eastern fox sparrow ((A transient bird))

3/8/04	3/19 - 4/17	4/25/32	10/1/11	10/5-11/15	11/30/10
earliest spring date	average spring stay (March 19 to Apr 17.)	latest spring date	earliest fall date	average fall stay (Oct 5 to Nov. 15)	latest fall date

Wednesday, February 3, 1943

34th Day—331 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Mississippi song sparrow N. W. B.  
*Melospiza melodia beata*  
 PR 3-4 (NOTE: This is the only sparrow listed as a permanent resident in Stark County.)



Thursday, February 4, 1943

35th Day—330 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Eastern fox sparrow B.  
*Passerella iliaca iliaca*

T 2-3

3/8/04 3/19-4/17 4/25/32; 10/1/11 10/5-11/15 11/30/10

Friday, February 5, 1943

36th Day—329 days to follow

According to Nat. Geographic  
 a common resident in some  
 localities!

CLEAR
CLOUDY
RAIN
SNOW

Eastern field sparrow N. B.

*Spizella pusilla pusilla*

SN 3-4

5 3/4 in.

3/12/11

3/25

10/20 10/29/11

Sweet singer - four or five  
 clear notes descending in  
 pitch and ending in a trill.  
 Sits on low perch or branch.

Grey cheeks and larger  
 than chipping sparrow.

## EXAMPLES:

Eastern tree sparrow

9/25/10

10/10

4/23

5/6/40

earliest

average

average

latest

Arrival fall

Fall

departure

spring

Arrival

arrival

departure

departure

Eastern fox sparrow (A transient bird)

3/8/04

3/19-4/17

4/25/32

10/1/11

10/5-11/15

11/30/10

earliest

average

latest

earliest

average

latest

spring

spring

spring

fall

fall

fall

late

(March 19

to April 17)

late

(Oct 5

to Nov 15)

Saturday, February 6, 1943

37th Day—328 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Eastern chipping sparrow N. B.  
*Spizella passerina passerina*  
 SN 3  $5\frac{1}{3}$  in.

3/15/29 3/27 10/17 10/30/33

Brownish red cap with  
 white stripe over eye.

Song; chippy, chippy, chippy

Sunday, February 7, 1943

38th Day—327 days to follow

41. "And whosoever shall  
 compel thee to go a  
 mile, go with him  
 twain."

st. Matthew, chap. 5

Monday, February 8, 1943

39th Day—326 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Eastern vesper sparrow N. B.  
*Pooecetes gramineus gramineus*

SN 3-4

3/21/35 3/28 10/30 11/5/11

## PHYSICS FUNDAMENTAL QUANTITIES

- I. a. The fundamental units in the  
 Eng. system are ft/lb/sec, in  
 the metric system cm/gr/sec.
- b. .0021 x 356 has 2 significant figures
- c. A vector quantity is one which  
 has both magnitude and direction.  
 A scalar quantity has magnitude  
 only. Velocity, Torque and force are vector quant.
- d. Acceleration is instantaneous, or  
 rate of change of velocity.
- e. Show cancellation of units & math.  
 in changing  $10 \text{ g/cm}^3$  to  $\text{lb/ft}^3$ , if  
 $454 \text{ g} = 1 \text{ lb}$  and  $2.54 \text{ cm} = 1 \text{ in}$ .
- $$\frac{10 \text{ g}}{\text{cm}^3} \cdot \frac{(\text{cm})^3}{(\text{in})^3} \cdot \frac{(\text{in})^3}{(\text{ft})^3} \cdot \frac{\text{lb}}{\text{g}} = \frac{\text{lb}}{\text{ft}^3}$$
- $$\frac{10}{1} \cdot \frac{(2.54)^3}{1} \cdot \frac{(12)^3}{1} \cdot \frac{1}{454}$$
- f.  $30 \text{ mi/hr.} = 44 \text{ ft/sec.}$  (Work)

Tuesday, February 9, 1943

40th Day—325 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Swamp sparrow N B  
Melospiza georgiana

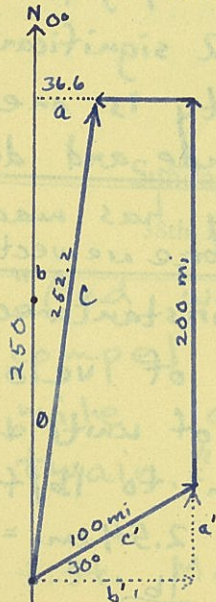
T3 SN 2

3/17/03 3/30 5/21/38 11/18/39

## VECTORS PHYSICS UNIFORM MOTION

II+III Find the total transfer (resultant) by the resolution method: 100 mi/hr, 60°T; 200 mi/hr, 0°T; 50 mi/hr, 270°T.

Also indicate how to get the bearing.  
 $\sin 30^\circ = .500$        $\sin 60^\circ = .866$   
 $\cos 30^\circ = .866$        $\cos 60^\circ = .500$



$$\sin 30^\circ = \frac{a'}{100}$$

$$.5 = \frac{a'}{100}$$

$$a' = 50 \text{ N}$$

$$\cos 30^\circ = \frac{b'}{100}$$

$$.866 = \frac{b'}{100}$$

$$b' = 86.6 \text{ E}$$

$$200 \text{ N}$$

$$50 \text{ W}$$

$$250 \text{ mi. N}$$

$$36.6 \text{ mi. E}$$

$$c^2 = a^2 + b^2$$

$$c^2 = 1420 + 62500$$

$$c^2 = 63920$$

$$c = \underline{\underline{252.2 \text{ mi.}}}$$

Wednesday, February 10, 1943

41st Day—324 days to follow

CLEAR
CLOUDY
RAIN
SNOW

White throated sparrow B.  
Zonotrichia albicollis

T 3-4

3/22/17 4/19 - 5/19 5/25/13; 9/10/11 9/18-10/30 11/6/10

 $\angle \theta =$  bearing in degrees

$$\tan \theta = \frac{36.6}{250}$$

$$* \tan \theta = 1.464$$

$$\theta = \underline{\underline{55^\circ 39' 18''}}$$

$$\tan 55^\circ = 1.428$$

$$\tan 56^\circ = 1.483$$

$$\frac{36}{55} = .655$$

$$\frac{.655}{60}$$

$$\tan \theta = \frac{36.6}{250}$$

$$\tan \theta = .146$$

$$\theta = \underline{\underline{8^\circ 17' 36''}}$$

bearing

$$\tan 8^\circ = .141$$

$$\tan 9^\circ = .158$$

$$\frac{5}{17} = .294$$

$$\frac{60}{.6}$$

$$17.640$$

\* Can be used as an example in interpolation. The decimal is in the wrong place for this problem

Thursday, February 11, 1943

42nd Day—323 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Eastern grasshopper sparrow N.B.  
*Ammodramus savannarum australis*

SN 3

4/3/10 4/20 10/11/33

III. PHYSICS UNIFORMLY ACCELERATED MOTION  
 A stone is thrown upward from a monument with a velocity of 64 ft/sec. and 6 sec. later hits the ground. (a) How long did the stone continue to rise? (b) How far did it fall to the ground and how high was the monument? (c) What velocity did it have when it hit the ground?



$$V_f = V_0 + at$$

$$0 = 64 - 32t \text{ (minus because grav-ity holds it back)}$$

$$32t = 64$$

$$t = 2 \text{ sec. rising}$$

$$S = \frac{1}{2}gt^2$$

$$S = 16 \cdot 16$$

$$S = 256 \text{ ft. from top to ground}$$

$$S = Vt \text{ (IF no gravity)}$$

$$S = 64 \cdot 6$$

$$S = 384$$

→

Friday, February 12, 1943

43rd Day—322 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Western Henslow's sparrow N.  
*Passerherbulus henslowi henslowi*

SN 2

4/18/38 4/23 7/16/35

$$S = \frac{1}{2}gt^2 \text{ (if it only fell)}$$

$$S = 16 \cdot 36$$

$$S = 576 \text{ ft}$$

$$576$$

$$384$$

$$192 \text{ ft. height of tower}$$

$$V_f = V_0 + gt$$

$$V_f = 0 + 32 \cdot 4$$

$$V_f = 128 \text{ ft/sec. velocity when it hit}$$

Ex 2: A bomb is dropped from an airplane moving horizontally with a speed of 100 mi/hr. If the air resistance is negligibly small, the bomb will reach the ground in 5 seconds when the altitude of the airplane is:

$$S = \frac{1}{2}at^2$$

$$S = \frac{1}{2} \cdot 32 \cdot 25$$

$$S = 400 \text{ ft.}$$

Saturday, February 13, 1943

44th Day—321 days to follow

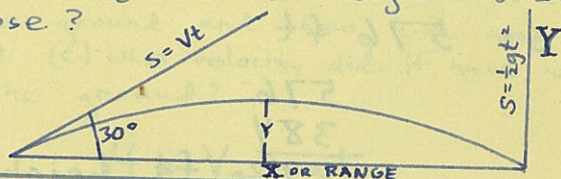
CLEAR
CLOUDY
RAIN
SNOW

Eastern Savannah sparrow N.B.  
*Passerculus sandwichensis savanna*

T2 SN 1

4/12/33 4/30 10/10 10/25/36

- V. A bullet is fired with a muzzle velocity of 2000 ft./sec. at an angle of  $30^\circ$ . (a) what was the range? (b.) What was the time of flight? (c.) What was the maximum height to which the bullet rose?



Sunday, February 14, 1943

45th Day—320 days to follow

The Beatitudes; Matthew ch. 5

The Lord's Prayer; Matthew ch. 6

- IV At  $5 \times 10^8$  place where  $g = 980 \text{ cm/sec}^2$ , a body is thrown vertically downward with a speed of 100 cm/sec. In 5 sec. it will have gone — meters from the starting point.

$$s = v_0 t + \frac{1}{2} a t^2$$

$$s = 100 \cdot 5 + \frac{1}{2} 9.80 \cdot 25$$

$$s = 5 + 122.$$

$$s = 127 \text{ meters}$$

Monday, February 15, 1943

46th Day—319 days to follow

CLEAR
CLOUDY
RAIN
SNOW

White-crowned sparrow B.  
*Zonotrichia leucophrys leucophrys*

T3

{ 3/22/17 5/3 5/20 5/25/35  
 { 9/29/33 10/3 10/25 11/28/33

$$X = \frac{V^2 \sin 2\phi}{g}$$

$$X = \frac{4000000 \cdot .866}{32}$$

$$X = \frac{3464000}{32}$$

$$\text{Range } X = 108,250$$

$$T = \frac{2V \cdot \sin \phi}{g}$$

$$T = \frac{4000 \cdot .5}{32}$$

$$T = \frac{2000}{32}$$

$$T = 62.5 \text{ sec.}$$

$$y = Vt \sin \phi - \frac{1}{2} g t^2$$

$$y = 2000 \cdot 31.25 \cdot .5 - 16 \cdot 974$$

$$y = 31250 - 15600$$

$$y = 15,650 \text{ ft}$$

Tuesday, February 16, 1943

47th Day—318 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Lincoln's sparrow B.  
*Melospiza lincolni lincolni*  
 T 2

{ 3/19/33    5/7    5/20    5/25/35  
 { 9/19/34    9/22    10/12    10/17/37

## VI

PHYSICS  
FORCE

Force - A push or pull acting on a body  
 Force always produces acceleration  
 Newton's Three Laws of Motion - pg. 315, 316, & 317.

$$F = Ma$$

Where force is dynes, mass in gr, a in cm/sec<sup>2</sup>, OR  
 " " " poundals, " " lb, " " ft/sec<sup>2</sup>.

$$\frac{F}{F_1} = \frac{a}{a_1} \quad \text{OR} \quad \frac{F}{W} = \frac{a}{g} \quad \text{body released to fall freely.}$$

a & g " " " "

## FRICTION

The force necessary to overcome irregular surfaces in starting motion. The coefficient of friction "μ" is:

$$\mu = \frac{R}{N}$$

R: Resistance to start it moving (to overcome friction)  
 N: Normal force pushing together (10 lb. on a table top pushes with a force of ten pounds. If it takes 2 lb. pulling on a string before the block starts to slide, then:

$$\mu = \frac{2}{10} \quad \mu = .20$$

Wednesday, February 17, 1943

48th Day—317 days to follow

FALL ARRIVAL OF TRANSIENT

CLEAR
CLOUDY
RAIN
SNOW

white-throated sparrow

9/10/11    9/18    10/30    11/6/10

980 dynes = 1 gram of force  
 32 poundals = 1 pound of force

NOTE: The formulae

$F = \frac{Ma}{g}$  gives the unbalanced  
force producing the acceleration  
directly in grams or pounds.

1. A 160 lb. man stands in an elevator. Find the force he exerts on the floor of the elevator under the following conditions: (a) Elevator being accelerated upward at 6.44 feet/sec<sup>2</sup>. (b) Elevator rising at constant velocity of 12 ft./sec. (c) Elevator while rising is suddenly slowed at -5 ft/sec<sup>2</sup>. (d) Elevator is dropping with uniform velocity of 20 ft./sec.
2. A 5-km. block is placed on a level table and a string is fastened to it which passes horizontally to a pulley

Thursday, February 18, 1943

49th Day—316 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Slate colored junco w. B.  
Junco hyemalis hyemalis

WV 3

9/16/11    9/22    4/30    6/17/39

at the edge of the table and thence extends downward to a 1-kgm. block suspended from its other end. Find the acceleration of the 5-kgm. block if friction is ignored.

1.  $F = Ma$  (in poundals) (c)  $F = Ma$   
 $F = \frac{160 \cdot 6.44}{32}$  (in pounds)

$$F = 32.3 \text{ lb.}$$

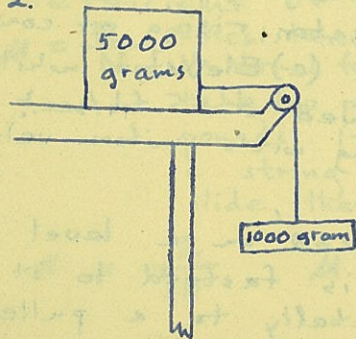
(a)  $32.3 + 160 = 192.3 \text{ lb.}$

(b) 160 lb. (because a constant vel.)

(d)

160 lb

2.



$$\frac{F}{W} = \frac{a}{g}$$

$$\frac{1}{6} = \frac{a}{980}$$

$$a = 1633 \text{ cm./sec.}^2$$

Friday, February 19, 1943

50th Day—315 days to follow

FALL ARRIVAL OF TRANSIENT

CLEAR
CLOUDY
RAIN
SNOW

Lincoln's sparrow

9/19/34    9/22    10/12    10/17/37

VII. PHYSICS UNIFORM CIRCULAR MOTION  
 What is the highest speed at which a 5000 lb. automobile could travel around a curve of 100-ft. radius, if the roadway were level and if the coefficient of friction between the tires and the roadway were 0.25?

$$F = \frac{MV^2}{r}$$

Ex: Two masses of 60 gr. each, are connected by a thread which passes over a light, delicately balanced pulley. If a mass of 10 grams is added to the one side, its downward acceleration is:

$$\frac{F}{W} = \frac{a}{g} \quad \frac{10}{130} = \frac{a}{980}$$

$$a = \frac{9800}{130}$$

$$a = 75 \text{ cm./sec.}^2$$

Saturday, February 20, 1943

51st Day—314 days to follow

CLEAR
CLOUDY
RAIN
SNOW

FALL ARRIVAL OF TRANSIENT

White-crowned sparrow

9/29/33 10/3 10/25 11/28/33

Sunday, February 21, 1943

52nd Day—313 days to follow

..... Every kingdom divided against itself is brought to desolation; and every city or house divided against itself shall not stand;

Matt. ch. 12, v. 25

Monday, February 22, 1943

53rd Day—312 days to follow

CLEAR
CLOUDY
RAIN
SNOW

FALL ARRIVAL OF TRANSIENT

Eastern fox sparrow

10/1/11 10/5 11/15 11/30/10

## PHYSICS Rotational Motion

VIII.

Angular speed =  $\frac{\text{angle swept through}}{\text{time needed}}$ 

$$\omega = \frac{\theta}{t} ; F = M\omega^2 r$$

$$\alpha = \frac{\omega_f - \omega_0}{t}$$

Torque = force  $\times$  lever arm

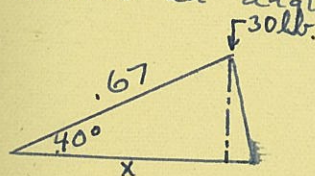
$$T = Fr ; \begin{cases} F = Ma \\ T = I\alpha \end{cases}$$

$$I = \sum mr^2$$

rotating wheels, etc.  

$$I = \frac{1}{2} Mr^2$$

1. Torque exerted by boy's foot in pushing vertically down with force of 30 lb upon a pedal at the end of an eight inch crank when the crank makes an angle of  $40^\circ$  with the horizontal is:



$$T = Fr$$

$$T = 30 \cdot .51$$

$$T = 15 \text{ lb. ft.}$$

$$\cos 40^\circ = \frac{x}{.67}$$

$$.67 \cdot .766 = x$$

$$x = .513$$



Tuesday, February 23, 1943

54th Day—311 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Eastern tree sparrow W. B.  
*Spizella arborea arborea*  
 W V 3-4  $6\frac{1}{3}$  in.

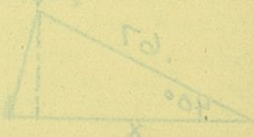
9/25/10 10/10 4/23 5/6/40

Similar in appearance to  
 chipping sparrow. One inch  
 longer. Dark spot on grey  
 breast.

Ex. Ten sec. after the switch was turned on an  
 electric fan had an angular speed of 600  
 rev./min. Its angular acceleration was:

$$\alpha = \frac{\omega_f - \omega_0}{t} \quad \alpha = \frac{20\pi}{10} \quad \alpha = 6.28 \text{ rad/sec}^2$$

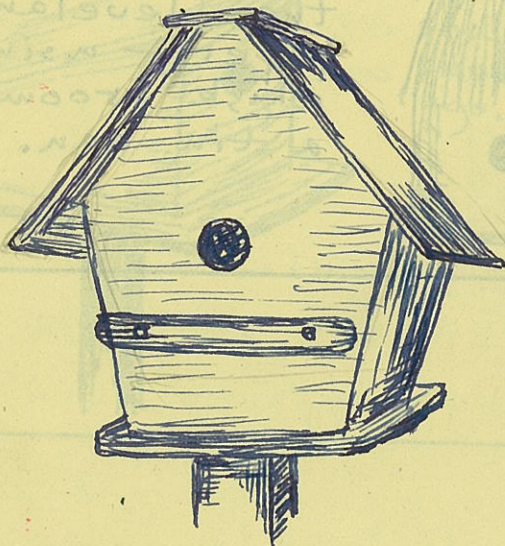
$$\omega_f = 10 \text{ rev./sec}$$



Wednesday, February 24, 1943

55th Day—310 days to follow

CLEAR
CLOUDY
RAIN
SNOW



Russ made  
 this bird  
 house to  
 pass his  
 handicraft  
 requirement  
 for first  
 Class Scout.

Thursday, February 25, 1943

56th Day—309 days to follow

CLEAR
CLOUDY
RAIN
SNOW

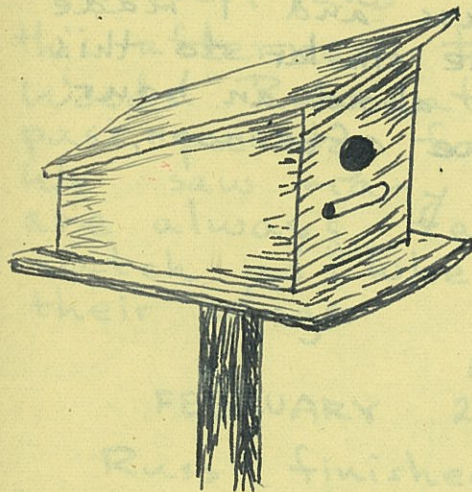


I saw plans for  
this house in  
the Cleveland  
paper — using a  
whisk broom and  
a tin can.

Friday, February 26, 1943

57th Day—308 days to follow

CLEAR
CLOUDY
RAIN
SNOW



I made one  
similar to this  
several years  
ago.

Sunday, February 28, 1943  
57th Day—308 days to follow  
Crow  
Cardinal  
Blue jay  
Starling  
"B. white"  
we saw the woodpeckers  
in Timber's woods  
P.V. 1. 1. 1.

Saturday, February 27, 1943

58th Day—307 days to follow

CLEAR
CLOUDY
RAIN
SNOW



Russ and I made one similar to this in about an hour one afternoon.

Sunday, February 28, 1943

59th Day—306 days to follow

"A double minded man is unstable in all his ways."

James ch. 1, v. 8

Special Data

FEBRUARY 21, 1942

Russell and I hiked this afternoon to Stadium Woods. Russ attempted to pass pacing for scouts. We saw many crows. They are always fascinating to watch as <sup>they</sup> wheel and flap their wings.

FEBRUARY 22, 1942

Russ finished passing his test this afternoon. Including today and yesterday we saw the following birds:

Crow	Eastern tree sparrow
Cardinal	English sparrow
Blue jay	Eastern song sparrow
Starling	Rock dove
Bob-white	Downy woodpecker

We saw the woodpeckers in Timken's Woods.

V

## Rock disintegration

1. Boulders of disintegration, harder than the country rock and has resisted the atmospheric agencies better than the other rock in the vicinity

## Factors effecting disintegration

1. Chemical factors caused by atmospheric water dissolving slowly the cement (lime carbonate) in sandstone leaving sand; the feldspar + hornblende in granite leaving clay; the cement in slates + shales leaving clay; and entirely pure limestone (since it is entirely soluble)
2. Mechanical factors
  - a. Frosts, splitting of rocks by water freezing
  - b. Wind, dust accumulating making a layer of soil - Sahara Desert, interior of Asia + perhaps part of our Great West.

End of section on  
Atmospheric Agencies

⑤ Cont. on pg. 220 →

Monday, March 1, 1943

60th Day—305 days to follow

CLEAR
CLOUDY
RAIN
SNOW

A SUMMARY OF BIRDS  
OBSERVED IN STARK  
COUNTY DURING WINTER  
OF 1942-1943. (Dec. 15 to Feb. 15  
inclusive.)

By October 4th the woods had taken on their fall coat of vari-colored hues. By the latter part of the month the eastern tree sparrows were here in abundance.

The permanent residents such as the cardinal, blue jay, crow, starling, rock dove, and bob-white could be observed practically every day in the winter if the wind and cold weren't too severe. Song sparrows were here all winter but you had to look for them. Cardinals

Tuesday, March 2, 1943

61st Day—304 days to follow

CLEAR
CLOUDY
RAIN
SNOW

were quite numerous—  
Blue jays not so common—  
starlings without number.

English sparrows  
and crows could often  
be seen on the bleak-  
est days of the winter.

Downy woodpeckers were  
fairly scarce but

Juncos were more  
numerous. Chickadees

were plentiful in some  
places and scarcer in  
others. Some days

nuthatches were  
abundant, on other days  
scarce. Titmice were

few and far between.

Brown creepers practically  
nil.

The goldfinch could  
be observed in heavy  
brush piles if one  
was cautious and ap

→

Wednesday, March 3, 1943

57

62nd Day—303 days to follow

CLEAR
CLOUDY
RAIN
SNOW

proached warily. Flickers  
were rare. Mr. Pratt  
recorded one great  
blue heron. A snowy  
owl was observed. A  
woodcock and screech  
owls were registered.  
Ring-necked pheasants  
were seen but no  
horned larks.

Thursday, March 4, 1943

63rd Day—302 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## THE BALANCE IN NATURE

The four main considerations involved:

1. The primeval balance
2. Assaults by man on that balance.
3. The temporary gains secured by these assaults, in terms of higher living standards.
4. The boomerangs: how man has assaulted himself or his children and grandchildren.

Friday, March 5, 1943

64th Day—301 days to follow

CLEAR
CLOUDY
RAIN
SNOW

The ratio of precipitation to absorption, to infiltration, to runoff to transpiration cannot be determined for the world or for the continent, for they vary with each locality. We might prepare a specimen account for area X as follows:

	Per Cent
Ground evaporation	20
Infiltration to storage underground	30
Infiltration immediately used by plants and transpired later	25
Runoff	25
	<hr/>
TOTAL effective precipitation	100

80  
Saturday, March 6, 1943

65th Day—300 days to follow

CLEAR
CLOUDY
RAIN
SNOW

A prerequisite for a good time on an overnite camping trip is a good sleeping bag or suitable bedding.

Sunday, March 7, 1943

66th Day—299 days to follow

"Greater love hath no man than this, that he would lay down his life for a friend."

From Robt. letter dated 3/7/43.

"We left Chicago about 11:30 P.M. and traveled thru Ill, Ky, Tenn, Ala, Ga, & arrived to page 77 →

Monday, March 8, 1943

61

67th Day—298 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Any watershed area is concerned with some of the uses of water itemized in the following list. A big drainage basin, like the Mississippi or the Columbia, is concerned with all of them.

1. Water for drinking and domestic purposes.
2. Water for livestock
3. A ground water level high enough to nourish crop roots.
4. Irrigation of arid lands.
5. Supplementary irrigation of humid lands in dry seasons.

OVER →

Tuesday, March 9, 1943

68th Day—297 days to follow

CLEAR
CLOUDY
RAIN
SNOW

6. Water for industries, factories, steam boilers, ice making.
7. Fisheries
8. Water for game birds and wild life.
9. Hydroelectric power
10. Navigation
11. Recreation, swimming, camping, scenery
12. River sites for cities and towns.
13. Rivers as political boundaries between states and nations.

Wednesday, March 10, 1943

69th Day—296 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Here are the chief abuses of water.

1. Floods artificially accelerated
2. Low water artificially encouraged, the obverse of flood.
3. Pollution, human and industrial.
4. Erosion on the valley slopes and on river banks.
5. Silting and gravel wash.
6. Salt-water invasion at river mouth.
7. Destruction of fish, shell-fish, bird, and game life.
8. Destruction of natural reservoirs, ground and artesian.



Thursday, March 11, 1943

70th Day—295 days to follow

CLEAR
CLOUDY
RAIN
SNOW

### SANITARY REQUIREMENTS NECESSARY FOR A SMALL GROUP OF CAMPERS...

Several hundred feet from the campsite in the direction to which the wind blows a pit, some eighteen inches deep, two feet long, and



one foot wide should be dug—with the loose dirt thrown in a pile at the side. This simple straddle latrine should preferably be in a thicket or some other sheltered spot, equipped with toilet paper protected from the rain by a tin can situated in some convenient location. The pit should, of course,

Friday, March 12, 1943

71st Day—294 days to follow

CLEAR
CLOUDY
RAIN
SNOW

be located at least 200 feet from the water supply and at a lower level. A trench shovel or scoop should be left near the dirt pile, and each camper after using the latrine should throw some loose earth into the pit.

The garbage pit is quite similar, being located in a place quite like the first. It should be about one-foot by one-foot and two or three feet in depth. A shovel or scoop should be left near it, also, so that dirt may easily be shoveled on the refuse.



Saturday, March 13, 1943

72nd Day—293 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Insufficient protection against insects, referring to mosquitoes of course, has ruined many an otherwise swell camping trip.

Sunday, March 14, 1943

73rd Day—292 days to follow

"..... for where a man's treasure is, there will his heart be also."

Matthew 6:21

Monday, March 15, 1943

74th Day—291 days to follow

CLEAR
CLOUDY
RAIN
SNOW

DATE Feb 14, 1943 — April 1, 1943

OBSERVER Richard Janson

LOCALITY Canton and near vicinity

- (?) Red-tailed hawk March 19  
very misty out. Seen alighting in field on road to Kent.  
(Near Hartville)
- Bob white Feb. 16, 18, 21, 22
- Rock dove Feb. 17, 18, 21 - March 10, 20, 21, 27, 28, 31 April 1. (Any day)
- Mourning dove March 6, 21, 27, 31
- Downy woodpecker Feb. 21
- Blue jay Feb. 18, 21 March 17, 29, 30, 31  
Moderately common
- Crow Feb. 21, 22 March 18, 19, 20, 27, 28 Common on outskirts of city
- (?) Catbird March 18 Didn't see it  
But sure sounded like one.
- Robin March 18, 19, 20, 21, 22-31 April 1  
(Common from March 18)
- Bluebird March 27 (Four of them)
- Starling Feb. 14, 16, 17, 18, 21, 25  
March 18, 19, 20, 28, 31 Apr. 1  
(Any day)

OVER →

Tuesday, March 16, 1943

75th Day—290 days to follow

CLEAR
CLOUDY
RAIN
SNOW

English sparrow Feb. 14, 15, 16, 17, 18, 21  
25 Mar. 1-18, 20, 23, 24, 30, 31, Apr. 1  
(Any day)

~~Bobolink March 27 (Bob Pratt)~~

Bronzed grackle March 18, 19,  
20 - Apr. 1 (Common from  
March 18)

(?) Cowbird Russell thought he saw  
one March 29.

Cardinal Feb. 18, 21, 25 - Mar 18,  
19, 20, 23, 24, 25, 29, 30 Apr. 1  
(Numerous any day)

Goldfinch March 20

Tree sparrow Feb. 17, 18, 21, 30  
Mar. 27 getting scarcer

Field sparrow March 20

Song sparrow Feb. 18, 20, 21 -  
March 18, 19, 23, 27, 28, 29, 30,  
31, April 1 (Common)

Junco March 27

Wednesday, March 17, 1943

76th Day—289 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## BIOLOGY & CHEMISTRY

Biology is the science of living things. Chemistry is the science of matter and the changes <sup>that matter</sup> it may undergo. As can be seen by the definitions a certain interlocking relationship exists between the study of biology and chemistry. It is this relationship, and its ultimate effects upon you and I, and everyone of us, that I shall endeavor to bring to your attention.

Picture with me a pastoral scene in the southern part of Ohio. We are standing on a hilltop under the spreading branches of a giant white oak. Looking down

Thursday, March 18, 1943

77th Day—288 days to follow

CLEAR
CLOUDY
RAIN
SNOW

and across to the next ridge the significant factor which comes to our attention is the solitude—the stillness of the situation—hardly a vestige of life or a sign of activity; that is, to one accustomed to see, as many of us do, with our eyes shut,

True enough, we'll notice a few things, the chipmunk scurrying across the dilapidated picket fence down and off to the right, finally to be swallowed up by his burrow beneath that boulder at the corner of the field. We'll see the hawk gliding lazily across the heavens searching with tireless eye for some extra bold or unsuspect-

→

Friday, March 19, 1943

78th Day—287 days to follow

CLEAR
CLOUDY
RAIN
SNOW

THE INITIATION CEREMONY  
 ing field mouse. Those of us with keen vision will perceive the red fox—ever cautious—sink into the background of the woodland. On closer scrutiny we will observe the minnows darting in the stream below us or hear the splash as a large bullfrog jumps from his hiding place along the bank and taker to the water.

But the astounding thing that is taking place, occurring right before our eyes is the multitude of life, and the countless changes, transformations, chemical reactions—call it what you may—that are taking place in our very presence.

Up to this point we have been observing

→

Saturday, March 20, 1943

79th Day—286 days to follow

CLEAR
CLOUDY
RAIN
SNOW

merely with our own eyes. Now let us observe taking the standpoint of the biologist or chemist when placed in a similar situation and asked to tell just what is going on.

(Introduction to speech for  
Chemistry Class)

Sunday, March 21, 1943

80th Day—285 days to follow

"The glory of young men is their strength; and the beauty of old men is the gray head."

Proverbs: 20, v. 29

Monday, March 22, 1943

81st Day—284 days to follow

CLEAR
CLOUDY
RAIN
SNOW

### THE INITIATION CEREMONY OF TROOP 118.

All members of the troop in Indian costume except those to be initiated. Not one word is to be spoken throughout the entire program.

- I Guide brings new members
- II Drummer makes one final beat
- III Silence
- IV Medicine man prays to great spirit
- V Pipe passed around
- VI Pause
- VII Dance
- VIII By sign language guide informs chief of new recruits
- IX Chief signals to bring them on.
- X One at a time read plaque
- XI Guide leads them back

Tuesday, March 23, 1943

82nd Day—283 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## TUMBLING

I've personally had more fun learning acrobatics, and have derived more benefits from it than any other sport.

A LIST OF SIMPLE EXERCISES  
(some not so simple!)

1. Forward roll
2. Backward roll
3. Headstand
4. Backward extension roll
5. Snap-ups
6. Head and hand spring
7. Hand spring
8. Cartwheel
9. Hand stand
10. Front flip (saumersault)
11. Back flip (saumersault)
12. Lots more too numerous to list

Although this is a pretty good order to learn the events in, I could do a back flip before I learned to do a snap-up correctly.

Wednesday, March 24, 1943

83rd Day—282 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Let this be known at the outset: I am not attempting to defend unscrupulous labor leaders, nor am I endeavoring to uphold any radical agitator whose purpose is to disrupt America's economic status.

However, after hearing arguments to the contrary I wish to present evidence on the behalf of the <sup>labor</sup> union as an American institution. It's <sup>formation</sup> was the natural result, following the combination of big business into trusts and monopolies in the latter part of the nineteenth century — founded to protect the laboring man from the encroachments of big business.

Thursday, March 25, 1943

84th Day—281 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Labor's services to this country are, perhaps, the most potent single factor to the welfare of the nation.

The Union's revolutionary policies have contributed more for the laboring man, and, consequently, ~~the nation~~<sup>you</sup>,—than any other comparative organization.

It was largely through its efforts that America has attained ~~the~~ highest standard of living ~~than~~ any other country in the world. . . . Within the

memory of living man the fight for the twelve hour day began! . . . Shorter hours, better working conditions, higher wages have all contributed

→

Friday, March 26, 1943

85th Day—280 days to follow

CLEAR
CLOUDY
RAIN
SNOW

to America's greatness. Bear that <sup>fact</sup> in mind when you desire to condemn the fundamental policies of the labor union.

from page 60

at Jacksonville about noon on Sat. After about 2 hr. we started again and arrived in Hollywood about midnight. The hotel and grounds are really beautiful. The beach is about 300 yds. in length. . . . We have more liberty and less regulations than at Iowa. . . . Convoys pass about every day along the coast. Airplanes are nearly always overhead.

The temp. has been around 70° most of the time.

To page 79 →

Thursday, March 25, 1943

84th Day—281 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Labor's services to this country are, perhaps, the most potent single factor to the welfare of the nation.

The Union's revolutionary policies have contributed more for the laboring man, and, consequently, <sup>you</sup> ~~the nation~~,—than any other comparative organization.

It was largely through its efforts that America has attained <sup>the</sup> highest standard of living ~~than~~ any other country in the world.....

Within the memory of living man the fight for the twelve hour day began!.... Shorter hours, better working conditions, higher wages have all contributed

→

Friday, March 26, 1943

85th Day—280 days to follow

CLEAR
CLOUDY
RAIN
SNOW

to America's greatness. Bear that <sup>fact</sup> in mind when you desire to condemn the fundamental policies of the labor union.

from page 60

at Jacksonville about noon on Sat. After about 2 hr. we started again and arrived in Hollywood about midnight. The hotel and grounds are really beautiful. The beach is about 300 yds. in length. .... We have more liberty and less regulations than at Iowa. .... Convoys pass about every day along the coast. Airplanes are nearly always overhead.

The temp. has been around 70° most of the time.

To page 79 →



Saturday, March 27, 1943

86th Day—279 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## SCOUT HIKE IN COOK'S WOODS

At 1:30 this afternoon the troop met at the church to go on a hike to Cook's Woods. We totaled nine. After hauling two long logs for a woodsman's fire we went to the Valley of the Moon to clear it and prepare it for the next troop initiation. We accomplished this by using knives, rakes which we made on the spot, and burning out the underbrush. We had a little

to page 79 →

Sunday, March 28, 1943

87th Day—278 days to follow

1. "Wine is a mocker, strong drink is raging: and whosoever is deceived thereby is not wise."

Proverbs, Chap. 20.

Monday, March 29, 1943

88th Day—277 days to follow

CLEAR
CLOUDY
RAIN
SNOW

from pg. 77.

One night it dropped to about 40°. The sun is very hot but there is always a cool breeze. The course is 18 weeks in length and includes bombing and gunnery. Graduation will be June 23 (Wed.) I am really glad I chose this. Robert."

He included some snapshots.

From pg. 78

excitement when our fire appeared to get out of control. It swept up the hillside but we managed to keep it to a narrow swathe about thirty feet wide at the broadest point. There was of course no actual danger since a wagon trail circled the rim of the valley. We will have to come back soon to finish cutting out the exposed berry bushes.

Russell passed his first class cooking test by

to page 80 →

Tuesday, March 30, 1943

89th Day—276 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Wednesday, March 31, 1943

90th Day—275 days to follow

CLEAR
CLOUDY
RAIN
SNOW

CONTINUED FROM PAGE 100.

Sunday May 23, 1943

The violets, both blue and white, are abundant and in certain spots maiden's hair and shield fern are growing in profusion. The wax-like flower of the dogwood tree and the similar flower of the may-apple are both in evidence. Wild ginger, spring beauty, wild phlox, jewel weed, wild rose, raspberry, blackberry, red clover, bedstraw, bluets, yarrow, Virginia creeper, meadow rue, wild geranium, black cohosh, cinquefoil, dandelion, common and English plantain, ground ivy, solomon's seal, common milkweed, great mullein,

over →

over  
from pg 79

cooking cereal, making hunter's stew (vegetable soup), and baking twist (biscuit baked on a stick.) His cooking was very well done—the twist especially good. We saw four bluebirds.....

## Special Data

MAY 23

CONTINUED FROM PAGE 81

wild grape, and trillium, are some of the commoner plants (All of which are not in flower, of course).

The birds observed are the following; some by sight, others by call:

- Baltimore oriole
- Barn swallow
- Red-winged blackbird
- Bluebird
- Robin
- Killdeer
- Goldfinch
- Song-sparrow
- Flycatcher
- Chickadee
- Chimney swift
- Mourning dove
- Crow
- Black billed cuckoo
- Yellow-billed cuckoo
- Grasshopper sparrow
- Chipping sparrow
- English sparrow
- Starling
- Bob white
- Night hawk
- House wren
- Yellow warbler
- Mourning dove
- Catbird
- Brown thrasher
- Blue jay

• Cardinal  
• Killdeer  
30. Towhee

Thursday, April 1, 1943

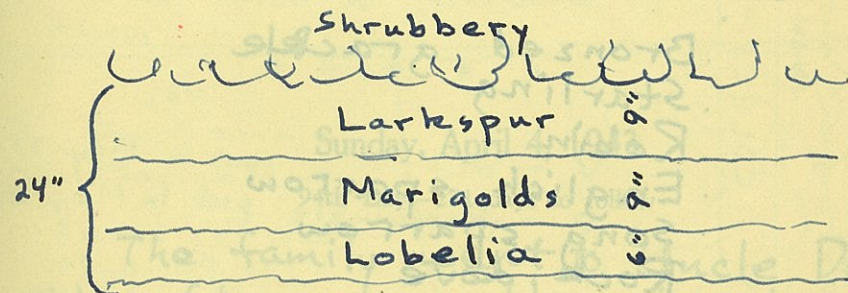
91st Day—274 days to follow

Annuals

ORANGE &amp; BLUE

CLEAR
CLOUDY
RAIN
SNOW

- 24" { Lobelia Crystal Palace compacta  
Dark Blue for borders  
Hght. 4 inches - 4 inch separation
- 24" { Dwarf double French marigolds mahogany  
(Royal scott All double)  
Mahogany and gold striped 12 in.  
Plant 9 inches apart
- Larkspur - Double Stock-Flowered  
Dark blue 9 inches apart



Gaillardia can be used behind the larkspur to fill in spaces—perennial or annual.

BORDER

## Special Data

MAY 23

CONTINUED FROM PAGE 81

wild grape, and trillium, are some of the commoner plants (All of which are not in flower, of course).

The birds observed are the following; some by sight, others by call:

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- Barn swallow
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- Mourning dove
- Crow
- Black billed cuckoo
- Yellow-billed cuckoo
- Grasshopper sparrow
- Chipping sparrow
- English sparrow
- Starling
- Bob white
- Night hawk
- House wren
- Yellow warbler
- Mourning dove
- Catbird
- Brown thrasher
- Blue jay

• Cardinal  
• Killdeer  
• Towhee

Thursday, April 1, 1943

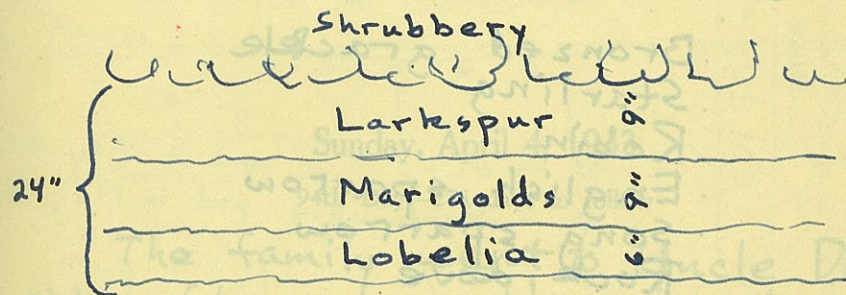
91st Day—274 days to follow

Annuals

ORANGE &amp; BLUE

CLEAR
CLOUDY
RAIN
SNOW

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Mahogany and gold striped 12 in.  
Plant 9 inches apart
- Larkspur - Double Stock-Flowered  
Dark blue 9 inches apart



Gaillardia can be used behind the larkspur to fill in spaces—perennial or annual.

BORDER

Friday, April 2, 1943

92nd Day—273 days to follow

CLEAR
CLOUDY
RAIN
SNOW

SUNDAY APRIL 4, 1943

CONTINUED

The large rock out-croppings  
are fun to scramble over

BIRDS SEEN TODAY

- Bronzed grackle
- Starling
- Robin
- English sparrow
- Song sparrow
- Rock dove
- Bob white
- Tree sparrow
- Red winged blackbird
- Towhee, red-eyed
- Cooper's hawk
- Brown thrasher
- Crow
- Cardinal

Saturday, April 3, 1943

93rd Day—272 days to follow

Border overlooking the swim-  
ming pool.

CLEAR
CLOUDY
RAIN
SNOW



Alternate:  
periwinkle and  
ageratum.

Periwinkle set out May 29.

Sunday, April 4, 1943

94th Day—271 days to follow

The family went to Uncle Don's  
this afternoon. It rained a  
little on the way down.  
Raymond, Russ, and I hiked  
to "the Gorge of the Five  
Hawks" soon after we arrived.

← Back to page 84

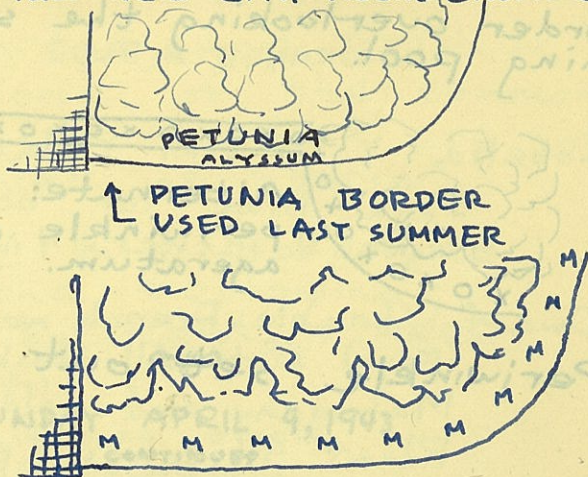
Monday, April 5, 1943

95th Day—270 days to follow

Border near Grill Room Entrance

CLEAR
CLOUDY
RAIN
SNOW

Border near Men's Locker Room  
 SNOW ON THE MOUNTAIN  
 COLEUS - Alternate red and yellow



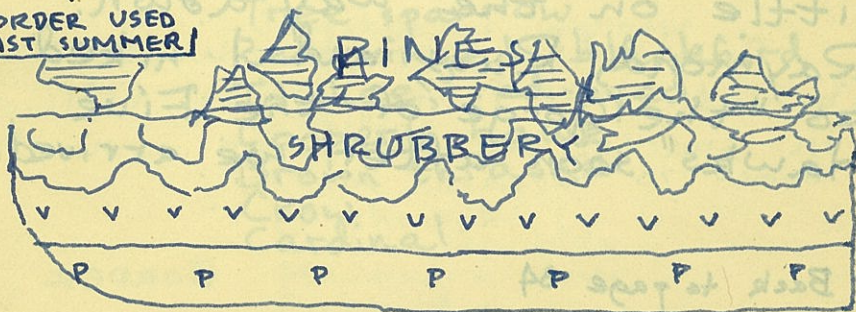
BORDER OF DWARF FRENCH  
 ↑ MARIGOLDS USED THIS  
 SUMMER (set out May 29)  
 (already in flower)

\* \* \* \*

↑ V - Vinca sagittata put in May 17, 43

↑ P - Periwinkle put in May 29, 43

↑  
 BORDER USED  
 LAST SUMMER

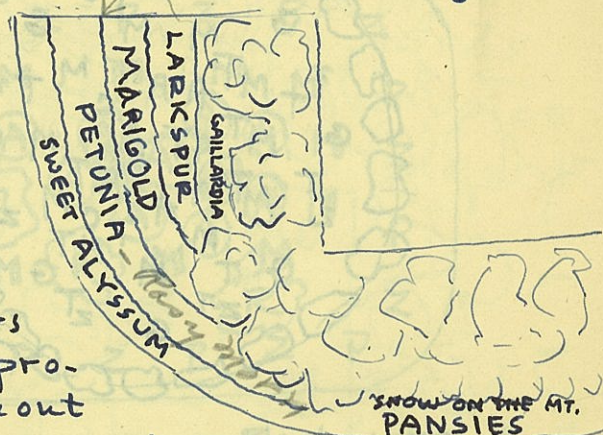
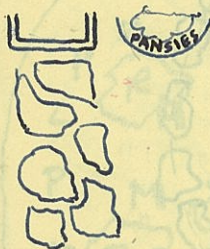


Tuesday, April 6, 1943

96th Day—269 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Border I had planned to use  
 this summer but the space is  
 not so large as I had thought

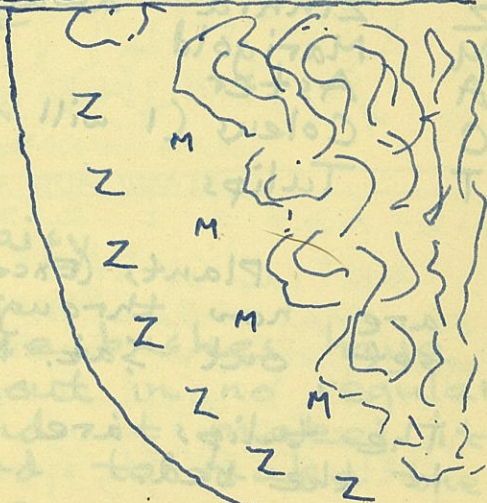


Have flowers  
 growing in pro-  
 fusion without  
 thinking too much  
 about color or uniform  
 rows.

KEY

Z Dwarf zinnia  
 M Marigold

Plants set out  
 May 29, 43



BORDER NEAR  
 MEN'S LOCKER  
 ROOM.

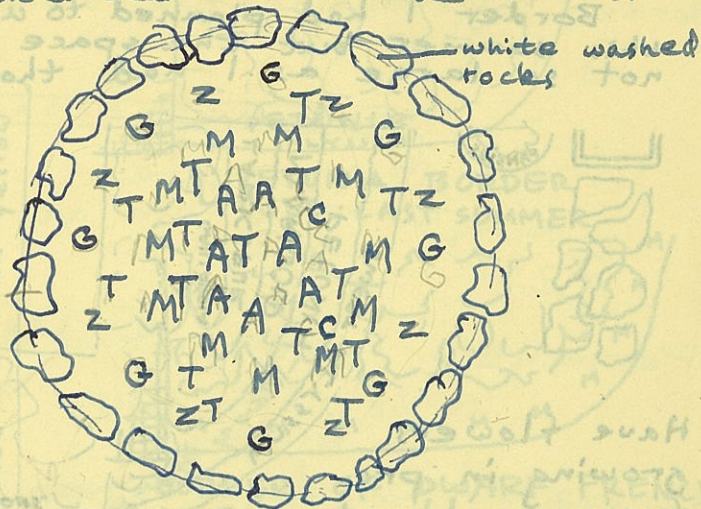
M. A.  
 R. J.

Wednesday, April 7, 1943

97th Day—268 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Round bed on little "Island"



## KEY

- G Geranium (Alternate red and pink)  
 Z Zinnia - dwarf  
 M Marigold  
 A Aster  
 C Coleus (I will make cuttings later)  
 T Tulips

Plants (Except tulips, which are now through flowering) set out Sat. May 29, 1943

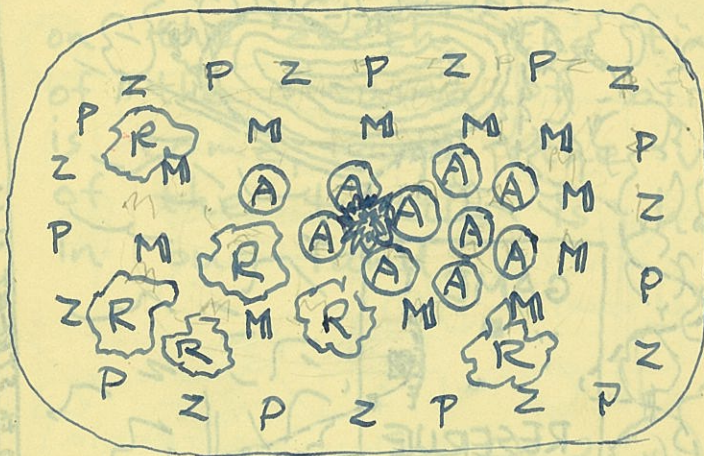
The tulips are scattered in the bed.

Thursday, April 8, 1943

98th Day—267 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Rectangular bed on small "Island."



## KEY

- Z Zinnia - dwarf  
 P Reriwinkle  
 M Marigold  
 A Aster  
 R Rose  
 Shasta daisy

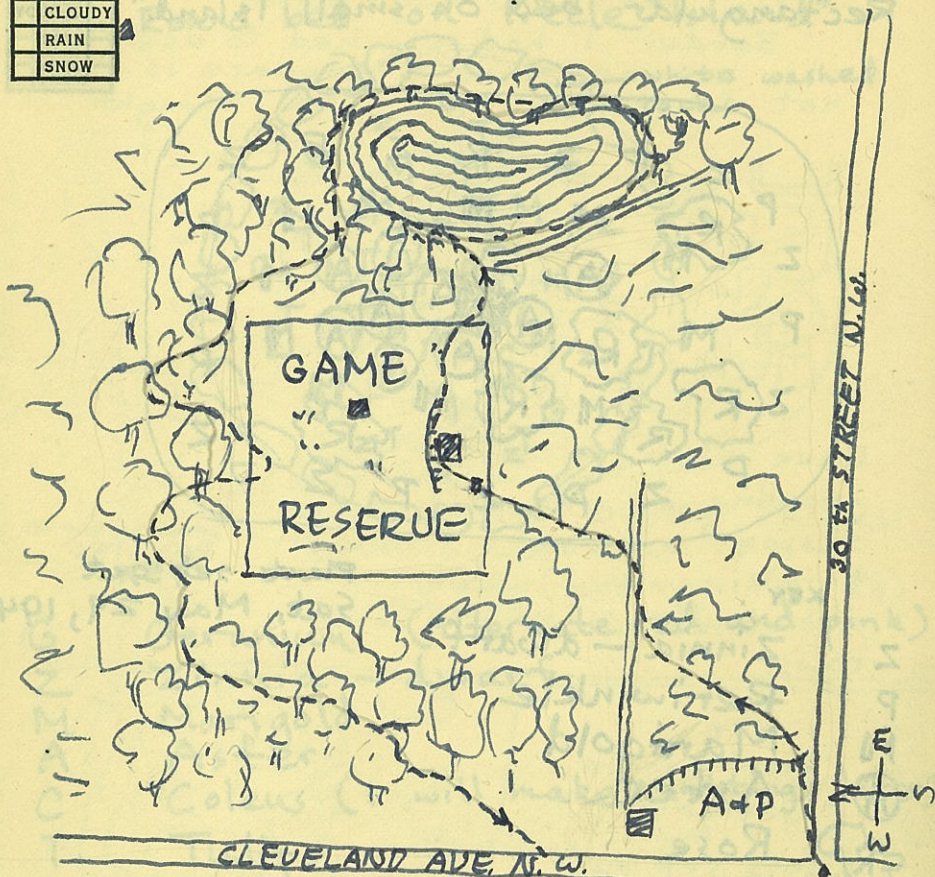
Plants set out Sat. May 29, 1943

The rose bushes have been set out in no regular pattern and it makes it rather hard to make the bed balance.

Friday, April 9, 1943

99th Day—266 days to follow  
APRIL 11, 1943

CLEAR
CLOUDY
RAIN
SNOW



We saw several chipmunks and several rabbits. Frogs were giving their peculiar mating calls. I was surprised at the number of juncos and bluebirds spotted. Field sparrows, song sparrows, crows, and a swallow were also observed. (I'll have to look up what kind of swallow it was.) Also cowbirds.

white-brown  
whip-poor-will

Saturday, April 10, 1943

100th Day—265 days to follow

CLEAR
CLOUDY
RAIN
SNOW

The flowers appear on the earth; the time of the singing of birds is come, and the voice of the turtle is heard in our land.

Sol. Ch. 2, v. 12

Sunday, April 11, 1943

101st Day—264 days to follow

Russell and I hiked all afternoon today in the land north and east of 30th Street and Cleveland Ave. N.W. Following is a very rough sketch<sup>map</sup> of the places we visited.

↖ Back to page 90

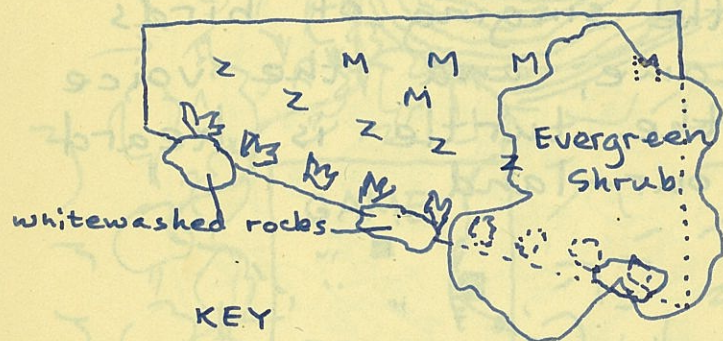


Monday, April 12, 1943

102nd Day—263 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Bed near entrance opposite  
"Little Island"



## KEY

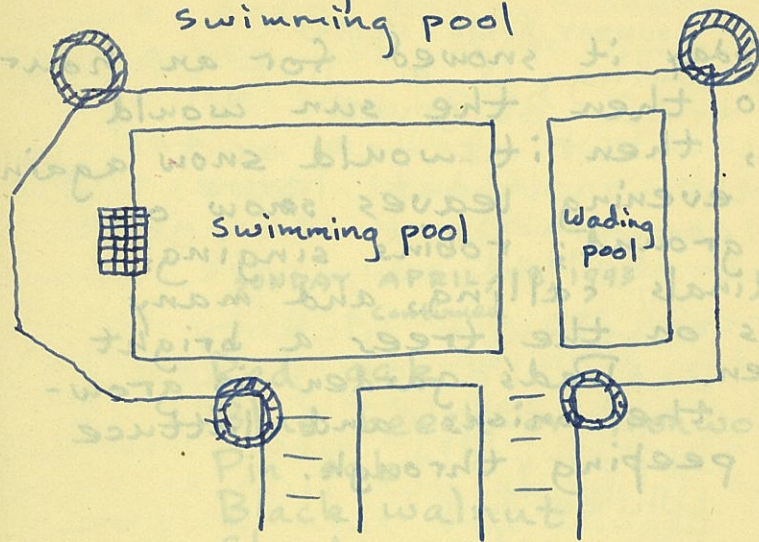
- ♡ Lily-of-the-valley - perennial
- Z Zinnia - set out May 29, 43
- M. Marigold - set out May 29, 43

Tuesday, April 13, 1943

103rd Day—262 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Flower pots near  
swimming pool



French marigolds\*, petunia\*,  
and geranium\*; vinca vine  
and periwinkle set out  
May 29, 43.

\* In flower when  
transplanted

Wednesday, April 14, 1943

104th Day—261 days to follow

CLEAR
CLOUDY
RAIN
<input checked="" type="checkbox"/> SNOW

Today it snowed for an hour or so then the sun would shine, then it would snow again. This evening leaves snow on the ground; robins singing, cardinals calling, and many buds on the trees a bright green. Dad's garden is growing; the onions and lettuce were peeping through.

Thursday, April 15, 1943

105th Day—260 days to follow

CLEAR
CLOUDY
RAIN
SNOW

SUNDAY APRIL, 18, 1943

continued

Red oak  
 Blue beech or ironwood  
 Pin oak  
 Black walnut  
 Staghorn sumac  
 Honey locust  
 Black oak  
 Catalpa  
 Sugar maple  
 Sycamore  
 Large toothed aspen  
 Sassafras

I heard a tufted titmouse singing in the woods.

Friday, April 16, 1943

106th Day—259 days to follow

CLEAR
CLOUDY
RAIN
SNOW

SUNDAY, APRIL 18, 1943

Following is a list of the trees observed. I'll admit that as far as telling them without leaves was concerned, I was just about stalled.

Butternut hickory  
 Basswood or linden  
 Crab apple  
 Slippery elm  
 White ash  
 Dogwood  
 American elm  
 Pignut hickory  
 White oak  
 Wild black cherry  
 Hop hornbeam  
 White walnut  
 Red maple  
 Black haw  
 Black ash  
 Juneberry or shadbush

↩ Turn back page 95

Saturday, April 17, 1943

107th Day—258 days to follow

CLEAR
X CLOUDY
RAIN
SNOW

I started back to work again today—where I worked all last summer. I am getting paid 65¢ an hour now, a 15¢ increase per hour over last year. I worked all day (8½ hours) raking leaves and straightening up flower beds. There was at least one other fellow working with me all the time—for a while there were five—and the job is still not done. I saw a cowbird and red winged black birds, and a bluebird on the way there. I rode my bike out. Some guy brought me home bike & all!

Sunday, April 18, 1943

108th Day—257 days to follow

The naturalists had a meeting today with a field trip entitled "Knowing Your Trees in Winter." C. H. Kuehnle and Don M. Brown were leaders. The weather was very pleasant, but we didn't do much actual hiking (in the park east of the stadium.)

↩ Turn back to page 96

Monday, April 19, 1943

109th Day—256 days to follow

CLEAR
CLOUDY
<input checked="" type="checkbox"/> RAIN
SNOW

I went to Scout Meeting tonight. Nothing of interest occurred.

CONTINUED FROM PAGE 129

mashed potatoes with gravy so rich and brown (with the hard boiled yolks of eggs floating around within) that it makes your mouth water to think of it; creamed asparagus, potato salad (with home-made salad dressing, of course); home-made bread with home-churned butter and home-made cottage cheese with home-made strawberry jam made from home-grown berries; the best

→

Tuesday, April 20, 1943

110th Day—255 days to follow

CLEAR
CLOUDY
RAIN
SNOW

CONTINUED FROM PAGE 98  
noodles you ever tasted; and pickles, mints and accessories (I'm trying to think if there was any thing else. I bet I've forgotten something). For dessert we had apple upside down cake served with home-made ice cream. Oh yes, I forgot—we also had applesauce.

Right before leaving she served us a plate with a generous slab of grape pie (made with honey) and another helping of her delicious ice cream. Oops, I forgot—she also passed a plate with large sugar cookies.

→

Wednesday, April 21, 1943

111th Day—254 days to follow

CLEAR
CLOUDY
RAIN
SNOW

FIELD NOTES: Sunday May 23, 1943

(I wrote these notes out originally while sitting on a rather large flat rock situated in the midst of a poison ivy patch.) The sun is blazing away in the heavens, but located as I am beneath the spreading branches of a large hickory the heat of the afternoon does not affect me.

The afternoon is still, for the most part, but a large yellow-jacket is droning loudly and the call of a cuckoo echoes across the valley. The floor of the woodlands is covered by a carpet of green and the moss on the rocks is still damp from the morning's dew.

TURN BACK TO PAGE 81

Thursday, April 22, 1943

112th Day—253 days to follow

CLEAR
CLOUDY
RAIN
SNOW

I watched a squirrel\* tonight. He was entirely unaware of my presence.

\* Gray squirrel

FRIDAY APRIL 23, 1943

continued

I guess spring has finally come to Ohio. It is very hot out in the sun. I have either seen or heard 18 species of birds in the past 6½ hours of work.

- |                   |   |
|-------------------|---|
| • Bob white       | • Rock dove                             |
| • Mourning dove   | • Starling                              |
| • Song sparrow    | • Crow                                  |
| • English sparrow | • Yellow billed cuckoo                  |
| • Robin           | • Bluebird                              |
| • Junco           | • Towhee                                |
| • House wren      | • Vesper sparrow                        |
| • Cardinal        | • Owl (don't know species)              |
| • Blue jay        | (Barred owl - species determined later) |
|                   | • Chimney swift                         |
|                   | • Killdeer                              |
- Russell saw a flicker.

Turn back to page 101

Friday, April 23, 1943

113th Day—252 days to follow

<input checked="" type="checkbox"/>	CLEAR
<input type="checkbox"/>	CLOUDY
<input type="checkbox"/>	RAIN
<input type="checkbox"/>	SNOW

My watch says six minutes 'till three. Now that quitting time is almost here my legs are so tired and my back so sore it's going to be a tough job getting home again. I've worked like ---- for six straight hours; raking leaves, hauling leaves, dumping leaves, burning leaves—and spading flower beds.

I don't know why I worked so hard. I haven't seen my boss all day. Perhaps it's because I'm thinking of my future pay checks. I'm getting ~~an~~ an hour now, a 30% increase over last summer.

← Turn back to page 101

Saturday, April 24, 1943

114th Day—251 days to follow

<input type="checkbox"/>	CLEAR
<input type="checkbox"/>	CLOUDY
<input type="checkbox"/>	RAIN
<input type="checkbox"/>	SNOW

I fixed the tennis courts for the first time today, and filled two large flower boxes with dirt. I set out the following plants, which Mr. Boyd had bought at Vail's Greenhouse.

G<sub>v</sub> P' P C G C P' G

G Geraniums  
 V Vinca vine  
 P' Dark purple petunias  
 P Lighter pink petunias  
 C Trailing coleus

I saw a brown thrasher and a cat-bird.

Sunday, April 25, 1943

115th Day—250 days to follow

Easter: Someone told me that this would be the latest Easter we will have till the year 2002!

Gray squirrel  
 Rabbit  
 Flicker  
 Bob white

TOTAL

\$4.55

Monday, April 26, 1943

116th Day—249 days to follow

CLEAR
CLOUDY
RAIN
SNOW

I bought the following annual seeds today to plant out at Brookside. I bought them at Holmes Seed Co.

- Morning glory, Heavenly Blue  
 $\frac{1}{2}$  oz. 50¢
- Morning glory, Carnell Red  
 $\frac{1}{2}$  oz. 50¢
- Nasturtium, Glorious gleam hybrids  
 1 oz. 20¢
- Nasturtium, Holmes Dwarf Rainbow mixture  
 1 oz. 15¢
- Sweet Peas, Holmes Rainbow Special mixed  
 1 oz. 20¢
- Zinnia, Lilliput, Dble, Pompon mixed  
 $\frac{1}{4}$  oz. 30¢ (baby zinnia)
- Zinnia, Fantasy mixed  
 Pkt. 10¢
- Zinnia, California giant mixture  
 Pkt. 10¢
- Zinnia, Giant Dahlia-flowered, mixed  
 Pkt. 15¢
- Phlox, Drummondii mixed  
 Pkt. 10¢

Tuesday, April 27, 1943

117th Day—248 days to follow

CLEAR
CLOUDY
RAIN
SNOW

- Marigold, Dwarf Harmony hybrid mixed  
 $\frac{1}{4}$  oz. 50¢
- Marigold, Gigantea sunset giants  
 Pkt. 15¢
- Calendula, Large double mixed  
 Pkt. 10¢
- Scabiosa, Giant hybrids mixed  
 Pkt. 10¢
- Larkspur, Double stock flowered mixed  
 Pkt. 10¢
- Bachelor's Button, Holmes Double mixed  
 Pkt. 10¢
- Snapdragon, Holmes' super giant flowered mixed  
 Pkt. 15¢
- Cosmos, Sensation mixed  
 Pkt. 10¢
- Salpiglossis, Large flowered-mixed  
 Pkt. 10¢
- Verbena, Giant finest mixed  
 Pkt. 10¢
- Petunia, Dwarf single bedding-mixed  
 $\frac{1}{8}$  oz. 40¢
- Allyssum, Carpet of Snow  
 $\frac{1}{4}$  oz. 35¢

TOTAL

\$4.55

Wednesday, April 28, 1943

118th Day—247 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## Signs of Storm

The sun dropped early out of sight,  
 The birds took wing on homeward flight,  
 The quivering leaves on the aspen trees,  
 Were trembling and quaking in the summer breeze,  
 But a stillness like death, that stifles the breath  
 Is a currier of Nature,—  
 The calm before the storm.

The wind grows stronger from  
 out the West,  
 A reddish haze filters  
 'cross the sky,  
 Then a hush of expectation,  
 all Nature is at rest—  
 'Till the storm breaks.

May 3, 1943

Thursday, April 29, 1943

119th Day—246 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## TUMBLING EVENTS FOR TWO PEOPLE

1. Barrel roll
2. Dive into forward roll over any number
3. Hand to shoulder—hand to knee stand
4. Handspring over knee (Assist and alone)
5. Handspring over back
6. Feet to hips—hand to hand spring over anchor man's head
7. Back flip with assist from mat
8. Front flip over two men.
9. Arm to arm stand
10. Hand to foot stand from mats clear up.
11. Weight lift man over head
12. Spread eagle over head



Friday, April 30, 1943

✓ 120th Day—245 days to follow

CLEAR
CLOUDY
RAIN
SNOW

The weather is about a month behind schedule this year—or so it seems. Real spring weather never seems to come. Oh, we've had a few nice days but for the most part it has been a long winter.

The predominate color in the flowers at this time of year is yellow, in fact it's almost the only color you see.

Forsythia

Daffodils

Tulips

Dandelion

Special Data

## TIME SHEET

Previous balance due \$16.00  
 Seeds 4.55  
 Work this spring (Sun Sat., etc.) 37.38  
 (Through May 15, 1943)

---

TOTAL 57.93

PAID MAY 20, '43

Total wage paid 50.37  
 D. A. B. deduction .50  
 Victory tax 1.22  
 Amount of check \$48.65

---

 //

Sunday, May 2, 1943 57.93  
 122nd Day—23 days to follow 50.37

---

Balance due \$7.56

OXO  
 Pd. separate for work  
 May 20, 1943 (Three hours)  
 (Removing shrubbery) \$2.50

## Special Data

Ordinary green plants are supposed to require at least 11 of the elementary substances in order to live. These are:

Carbon, C  
Oxygen, O  
Nitrogen, N  
Hydrogen, H

Potassium, K  
Calcium, Ca  
Magnesium, Mg  
Phosphorus, P  
Sulfur, S  
Iron, Fe  
Chlorine, Cl (In some plants)

Saturday, May 1, 1943

121st Day—244 days to follow

It was very cold today ushering in the month of May. I planted some sweet peas and morning glories under the wire screening around the tennis courts. The sweet peas are planted too late and I don't expect them to amount to much.

CLEAR
<input checked="" type="checkbox"/> CLOUDY
RAIN
SNOW

Sunday, May 2, 1943

122nd Day—243 days to follow

"Any kind of creative work—art, writing, painting—is only one percent inspiration. The other 99 percent is perspiration."

Monday, May 3, 1943

123rd Day—242 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## BETWEEN TWO OCEANS

## Eight "Regions" of the United States

1. The Atlantic + Gulf Plains
  - a. Dismal Swamp of N. Ca.
  - b. Everglades
  - c. Cotton belt
2. The Eastern plateau
  - a. Pine country
  - b. Indifferent soils
  - c. Boulder farming
3. Appalachian Mountain Country and the Ozarks
  - a. Heavy forests originally
  - b. Steep slopes
  - c. Subject to man-made erosion.
4. Great Lakes Plains
  - a. Good soils
  - b. Natural forest
  - c. Corn belt country
  - d. Heavy rainfall

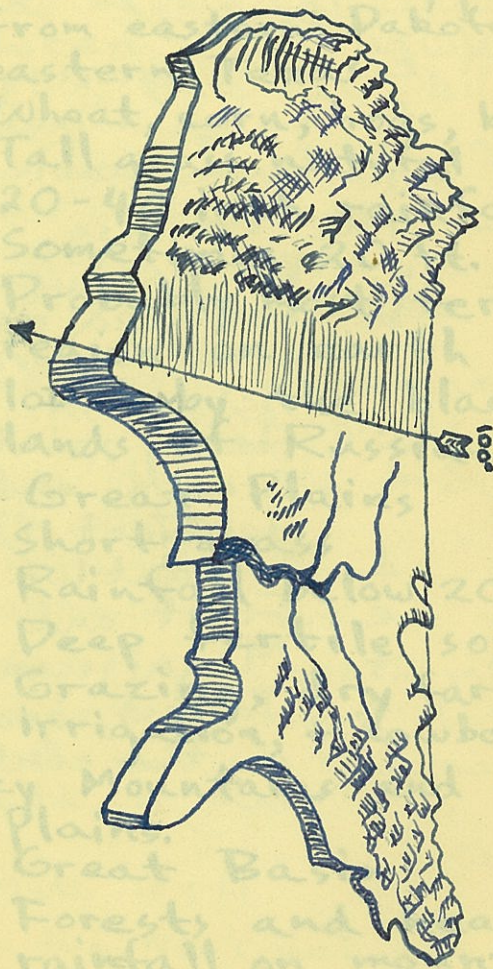
To page 115 →

Tuesday, May 4, 1943

124th Day—241 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## BETWEEN TWO OCEANS



MAP 1

Wednesday, May 5, 1943

125th Day—240 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## BETWEEN TWO OCEANS



MAP I

Thursday, May 6, 1943

126th Day—239 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## 5. The Prairie Plains

- West of Mississippi from eastern Dakota to eastern Texas.
- Wheat, corn, hogs, beef
- Tall grass natural cover
- 20-40 inch rainfall
- Sometimes 20 ft. soils
- Probably most fertile region on earth followed by the black lands of Russia

## 6. The Great Plains

- Short grass
- Rainfall below 20 inches
- Deep fertile soil
- Grazing, dry farming, irrigation, + cowboys.

## 7. Rocky Mountains and Western Plains.

- Great Basin
- Forests and heavy rainfall on mountains.

To page 115 →

→

Friday, May 7, 1943

127th Day—238 days to follow

CLEAR
CLOUDY
RAIN
SNOW

- c. Arid valleys between
- d. Bunch grass, sage brush, cactus
- e. Some grazing, some irrigation
- f. Large mineral deposits
- g. Incomparable scenery

## 8. The Pacific

- a. Vertical country
- b. Forested mountains, grass covered valleys, rich soils.
- c. Heavy rainfall in coastal Oregon and Washington; deficient rainfall in Cal.
- d. Irrigation
- e. Fruit and truck crops
- f. Magnificent scenery
- g. Tallest, grandest trees on the continent.

Saturday, May 8, 1943

128th Day—237 days to follow

CLEAR
CLOUDY
X RAIN
SNOW

The warblers are back.  
I saw a yellow warbler,

Other birds which I saw today include brown thrasher, catbird, wren, nighthawk, fox sparrow, blue jay, killdeer.

I mowed the lawn at the Club today, thinned and spread out some petunia and marigold plants in larger flats. It rained off and on all day.

A two foot blacksnake scurried into the grass this morning, when I nearly stepped on it while bringing some tools out.

Sunday, May 9, 1943

129th Day—236 days to follow

"Not that which goeth into the mouth defileth a man; but that which cometh out of the mouth, this defileth a man."

Matt. 15:11

This year the Neo's net only on this day for a spring bird count. I wasn't at the meeting.

Monday, May 10, 1943

130th Day—235 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## RAINFALL

\* The dividing line runs approximately at the 100<sup>th</sup> meridian, where the two hands meet, and cuts the continent in two. This is a most important line.

The water problems of the eastern half revolve around floods, navigation, erosion, water excess. The problems of the western half - save in coastal Oregon, which has the highest rainfall on record - revolve around the questions of drought, dust storms, water deficit and storage.

Irrigation projects in the east are few, in the west many. The east was once a land primarily of forest, the west one of grass.

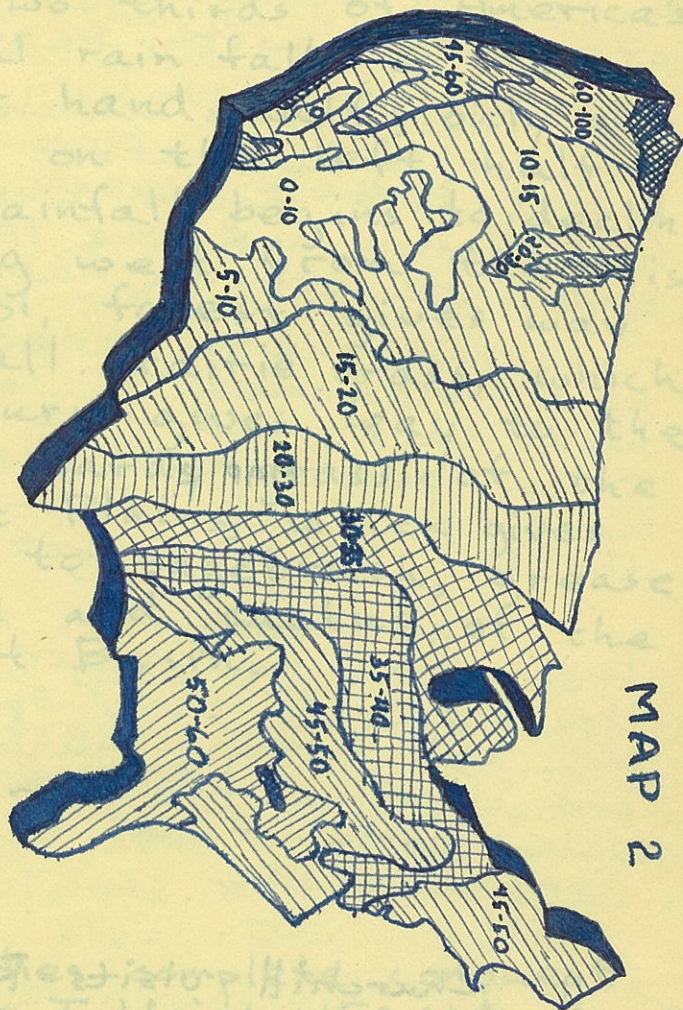
To page 121 →

Tuesday, May 11, 1943

131st Day—234 days to follow

CLEAR
CLOUDY
RAIN
SNOW

RAINFALL IN INCHES

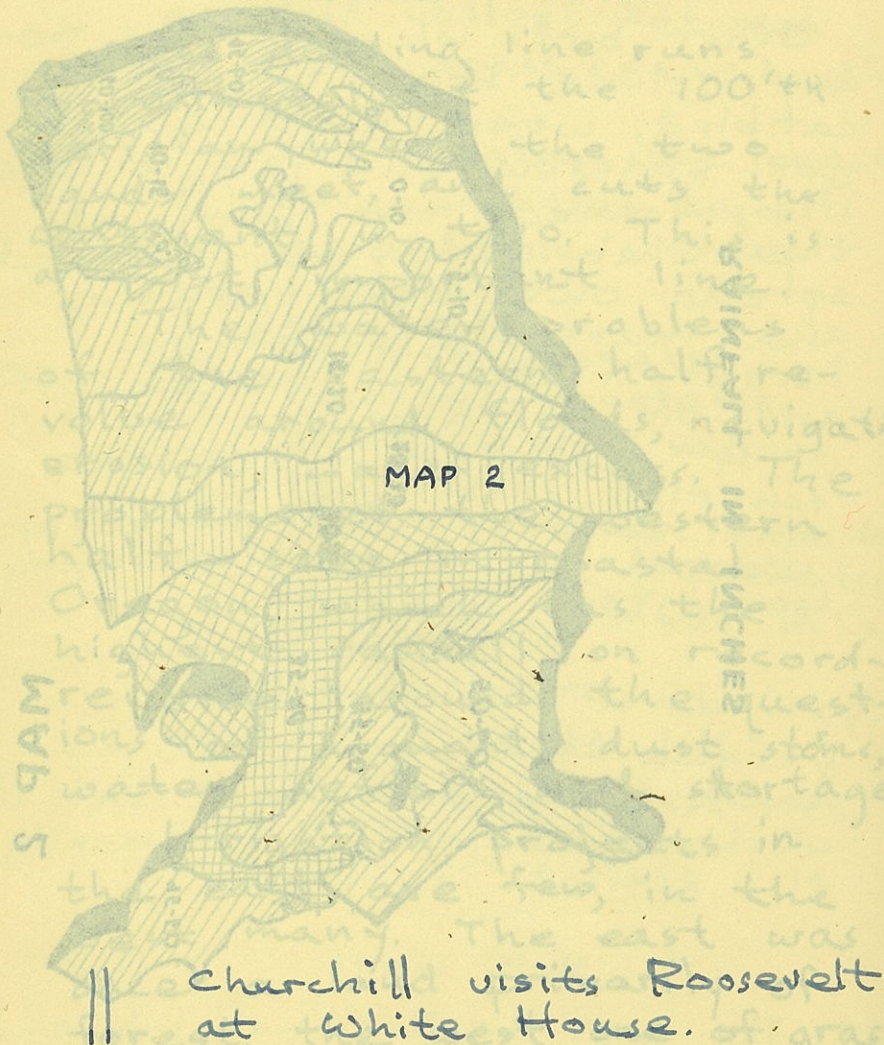


Wednesday, May 12, 1943

132nd Day—233 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## RAINFALL IN INCHES



Thursday, May 13, 1943

133rd Day—232 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Two thirds of America's annual rain falls on the right hand half; only one third on the left half. As rainfall begins to decline, moving west from the Mississippi, forest gives way to tall prairie grass, which in turn gives way to the short hardy grass of the Great Plains, which gives way to sagebrush, greasewood and cactus of the Great Basin.

|| Allies complete conquest of Tunisia. 150,000 prisoners and tons of materials seized.

Friday, May 14, 1943

134th Day—231 days to follow

CLEAR
CLOUDY
RAIN
SNOW

The Junior - Senior Prom was to nite and my worries (decorations, etc.) are over with. See page 191

The Robins which came to our grape arbor, last spring and again this year have nested, and the little birds are growing rapidly.

The cherry trees have blossomed in our back yard and the plum trees, pears, and peaches, have also flowered - apples, too (I can't forget them).

The leaves on the trees are no longer the tiny ones of early spring but are getting much larger and changing from the pale yellow greens to a darker shade.

|| U.S. troops invade Attu Islands. Drive to sweep Japs from Aleutians.

Saturday, May 15, 1943

135th Day—230 days to follow

CLEAR
CLOUDY
<input checked="" type="checkbox"/> RAIN
SNOW

Spike (Dick Spilker) started to work today. He is going to help me around the clubhouse this summer. We fixed the tennis courts and mowed grass, most of which had never been mowed this spring.

We played baseball again to-night.

Sunday, May 16, 1943

136th Day—229 days to follow

I drove out to Brookside this afternoon with Russell but didn't work. This evening I hiked alone in the woods.... The violets are numerous - common blue, Downy yellow, and Canada white. Warblers, goldfinch, and towhees are numerous. Sparrow-hawk.

|| 150 American bombers pound Emden



Monday, May 17, 1943

137th Day—228 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## NATIVE VEGETATION, 1630

Of the two billion acres of America in 1630, it is estimated that almost half, or just short of a billion acres, was in forest, thirty eight per cent in strong grasses, eleven per cent in the shrubs and vegetation of arid plains, and only two and a half per cent in outright desert.

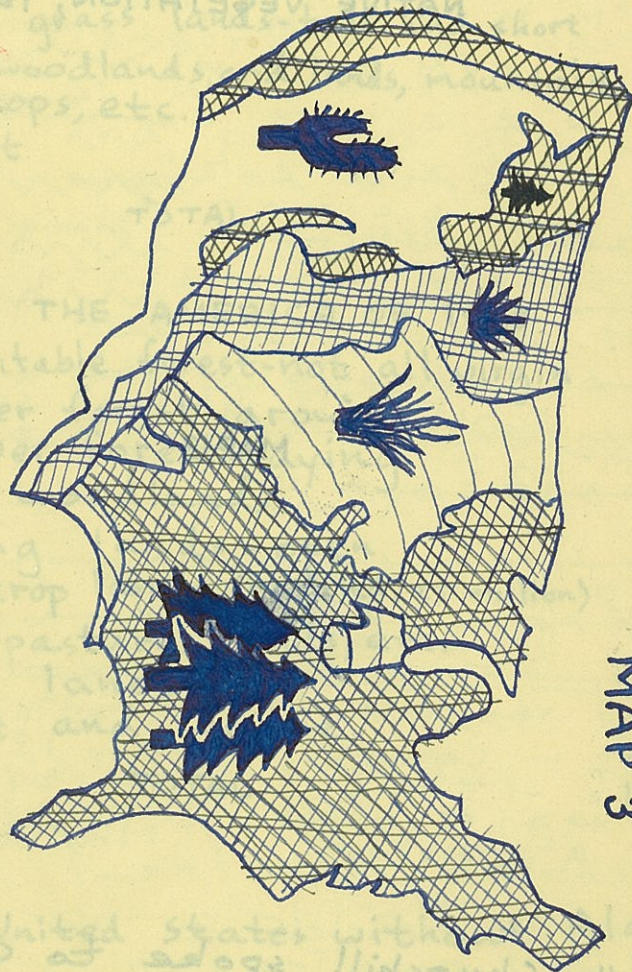
|| R. A. F. blows up two huge Nazi dams; Ruhr, Eder industrial districts flooded.

Tuesday, May 18, 1943

138th Day—227 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## 1630, NATIVE VEGETATION



MAP 3

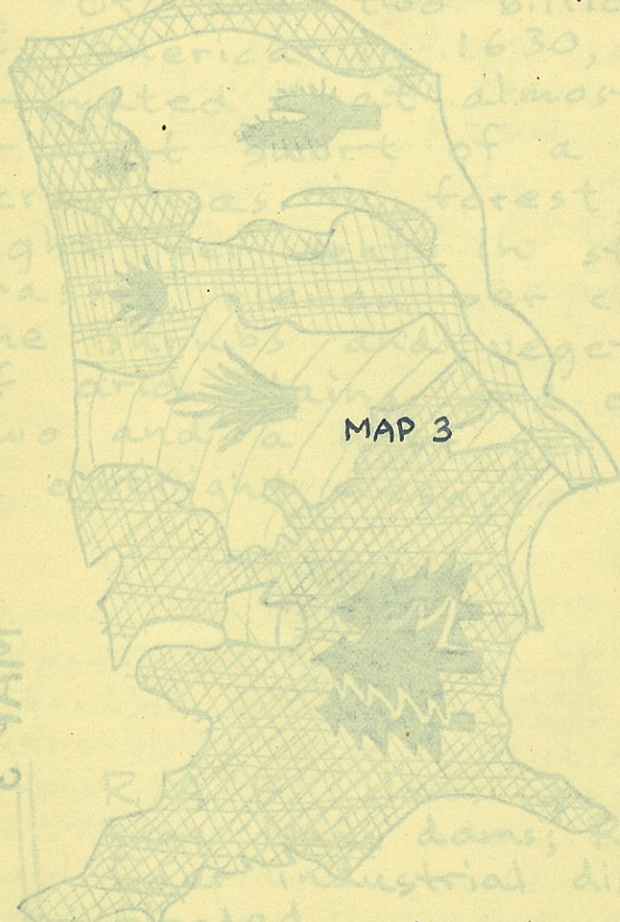
|| U. S. cracks enemy defenses on Attu.

Wednesday, May 19, 1943

139th Day—226 days to follow

CLEAR
CLOUDY
X RAIN
SNOW

## NATIVE VEGETATION, 1630



MAP 3

Churchill spoke to Congress.  
Enemy retreats on Attu.

Thursday, May 20, 1943

140th Day—225 days to follow

CLEAR
CLOUDY
X RAIN
SNOW

## THE AMERICA OF 1630\*

Millions of Acres

Dense primeval forest	820
Native grass lands-tall and short	600
Open woodlands, arid lands, mountain tops, etc.	430
Desert	50
<b>TOTAL</b>	<b>1,900</b>

## THE AMERICA OF 1930

Merchantable forest-not all virgin	150
Cut-over forest-growing	200
Cut-over forest-dying	100
Farm woodlands	150
Grazing lands-open	330
Farm crop lands (irrigated, 25 million)	400
Farm pasture lands, etc.	420
Urban lands	50
Desert and waste	100
<b>TOTAL</b>	<b>1,900</b>

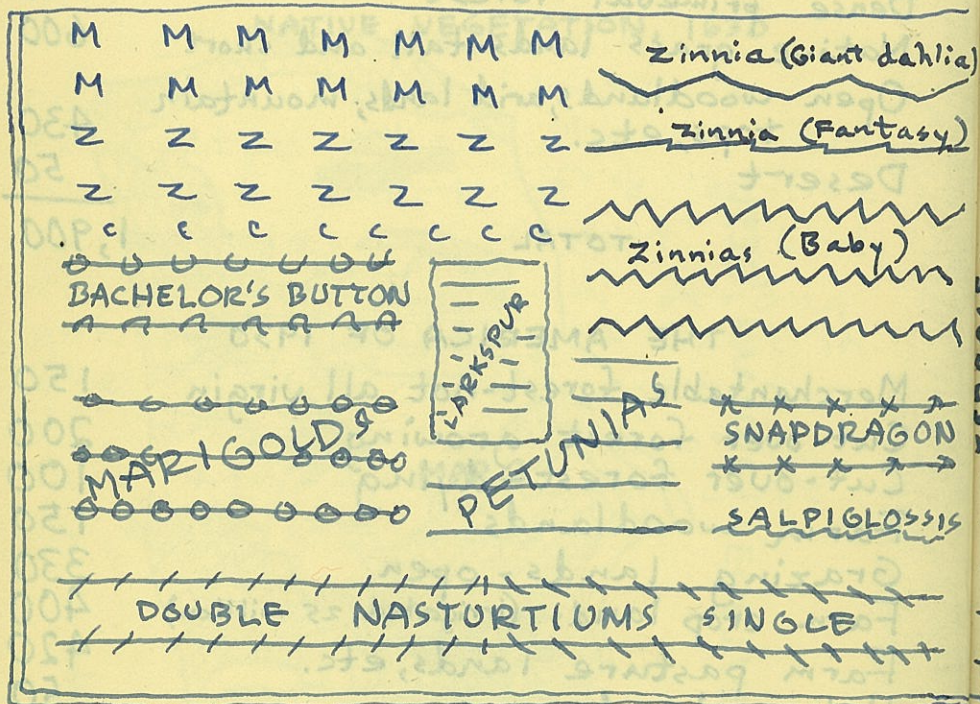
\* United States without Alaska

Friday, May 21, 1943

141st Day—224 days to follow

CLEAR
CLOUDY
<input checked="" type="checkbox"/> RAIN
SNOW

Spike and I prepared the beds and planted flower seed.



The letters stand for plants set out.

C — Coreopsis May 18, 43  
 Z — Zinnia May 29, 43  
 M — Marigold May 29, 43  
 A — Aster May 29, 43

100,000 homeless as midwest floods rage on.

U.S. fliers bag 113 more Axis ships

Saturday, May 22, 1943

142nd Day—223 days to follow

CLEAR
CLOUDY
<input checked="" type="checkbox"/> RAIN
SNOW

We planted zinnia seed today, mowed grass and fixed the tennis courts. This afternoon a gang of us raked, leveled, and put in grass seed on some <sup>one's</sup> lawn. We also laid stone slabs for a walk and I planted four evergreen trees in the front yard.

A M A M A M A M A  
 A Z A Z A Z A Z A  
 A A ~~Sunday, May 23, 1943~~ A A  
 A A <sup>142nd Day—222 days to follow</sup> A A

X CLEAR

The family went to Uncle Don's today for dinner. It was a good old fashioned chicken dinner with all the trimmings. The menu included fried chicken,

TURN BACK TO PAGE 98

Monday, May 24, 1943

144th Day—221 days to follow

<input type="checkbox"/>	CLEAR
<input type="checkbox"/>	CLOUDY
<input checked="" type="checkbox"/>	RAIN
<input type="checkbox"/>	SNOW

## EROSION AREAS

One hundred million acres of formerly cultivated land has been essentially ruined by water erosion—an area equal to Illinois, Ohio, North Carolina and Maryland combined—the equivalent of 1,250,000 eighty acre farms. In addition, this washing of sloping fields has stripped the greater part of the productive top soil from another 125 million acres now being cultivated. Erosion by wind and water is getting under way on another million acres. More than 300 million acres— one sixth of the country— is gone, going, or beginning to go. This, we note, is on land originally the most fertile.

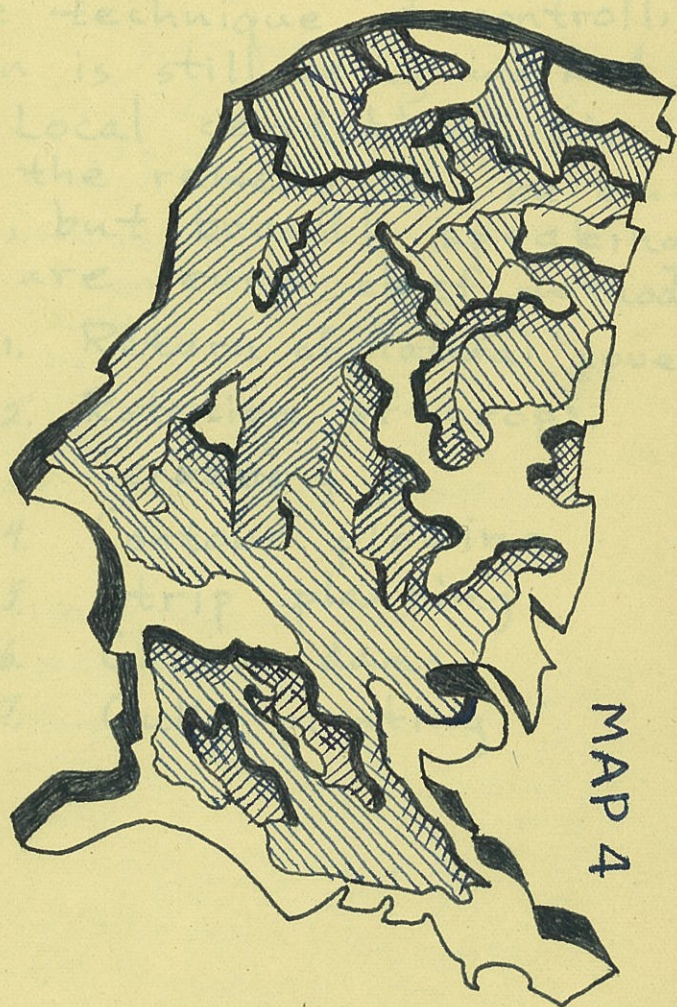
Tuesday, May 25, 1943

145th Day—220 days to follow

<input type="checkbox"/>	CLEAR
<input type="checkbox"/>	CLOUDY
<input checked="" type="checkbox"/>	RAIN
<input type="checkbox"/>	SNOW

(The erosion in white areas)

## EROSION AREAS



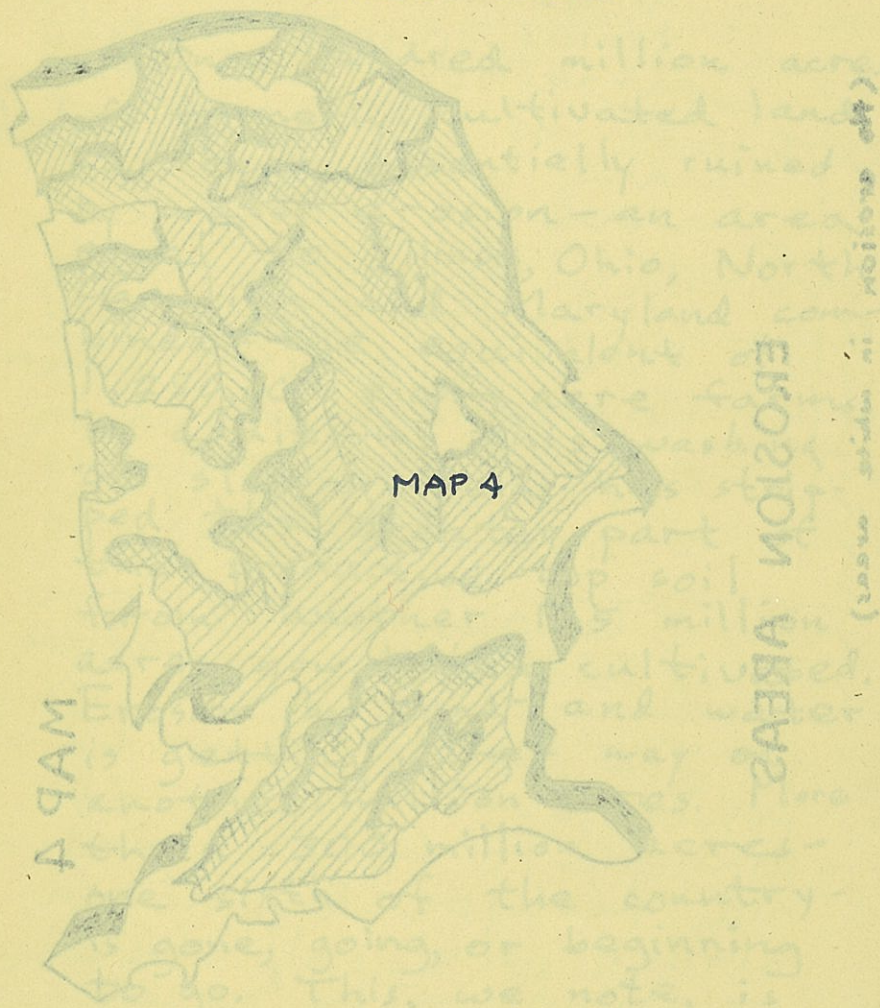
MAP 4

Wednesday, May 26, 1943

146th Day—219 days to follow

CLEAR
CLOUDY
<input checked="" type="checkbox"/> RAIN
SNOW

## EROSION AREAS



Thursday, May 27, 1943

147th Day—218 days to follow

CLEAR
CLOUDY
RAIN
SNOW

The technique of controlling erosion is still being worked out. Local conditions dictate the remedy to be employed, but broadly speaking there are seven chief methods.

1. Return of natural cover
2. Rotation of crops
3. Terracing
4. Contour plowing
5. Strip planting
6. Check dams
7. Gully planting

Friday, May 28, 1943

148th Day—217 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## STEPS IN EROSION

1. Sheet erosion  
A general skimming of the rich topsoil
2. Finger or shoestring erosion  
Tiny wandering furrows begin to appear.
3. Gullies  
One furrow becomes the main channel

## THE TOLL OF WASTE

Fire, by stripping the litter and humus, encourages erosion and flood.

(—)

I saw a hummingbird while at work today. She was getting nectar from the petunias in one of the flower boxes.

Saturday, May 29, 1943

149th Day—216 days to follow

CLEAR
X CLOUDY
X RAIN
SNOW

We worked like Trojans for ten hours. The opening party at Brookside is tonight. We set out plants—geraniums, calendula, marigolds, asters, zinnia, coleus, and periwinkle.

Yesterday I put in some petunia plants and more geraniums.

The morning glories are three or four inches tall by now and some of the seed we planted Friday a week ago has germinated.

Sunday, May 30, 1943

150th Day—215 days to follow

RAIN: . . . . .

Today is the thirtieth day of May, and I would be willing to lay down money that it has rained at least 25 of those days. At the present moment I am sitting on the porch while water is pouring down in buckets-full and thunder is rumbling off in the West.

Monday, May 31, 1943

151st Day—214 days to follow

CLEAR
CLOUDY
<input checked="" type="checkbox"/> RAIN
SNOW

We trimmed shrubbery and hedges <sup>almost</sup> all day—just around the clubhouse. It rained off and on all the while we were working. The plants which we put in yesterday are in good shape and the seeds which we put in a about a week ago are beginning to make their appearance. We put in a few gladiola bulbs this-afternoon.

- Bobwhite
- Catbird
- Robin
- Cardinal
- Bluejay
- Chimney swift
- Brown thrasher
- Towhee
- House wren
- Crow
- Flicker
- Yellow warbler
- Goldfinch
- English sparrow
- Yellow-billed-cuckoo
- Chipping sparrow
- Vesper sparrow
- Song sparrow
- Grasshopper sparrow
- Starling
- Field sparrow

Special Data

"MAY"

16 The dogwood trees on the hillsides, with their wax-like flowers, lend a striking appearance to the May landscape.

18 The sweet-scented lilacs are the outstanding floral specimens at Brookside today, with the large bunches of blossoms on tall, well formed bushes.

19 Dainty lilies-of-the-valley and large blue flags are beginning to add their decorative notes to the garden scene. The stately tulips have been in evidence since before Easter but it is only within the last few days that they are really coming into their own.

## Special Data

## CROP LANDS

It takes nature from 500 to 800 years or more to manufacture one inch of soil by breaking down and weathering the earth's crust and blending the debris with various vegetable and animal constituents.

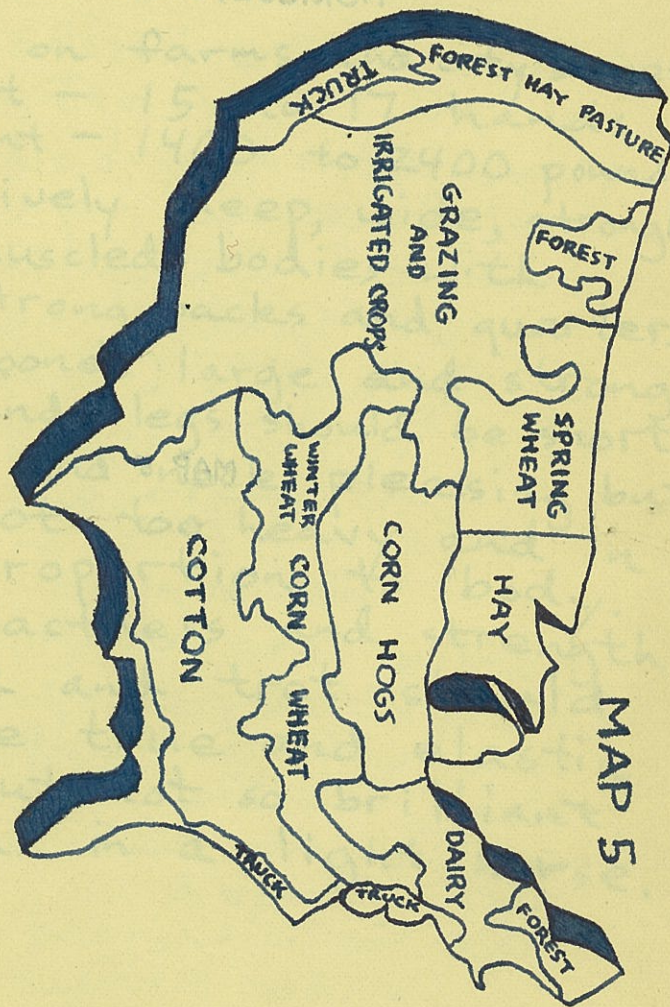
The Soil Conservation Service, measuring land in Georgia, found that on a five per cent slope topsoil twelve inches thick, if plowed and left uncovered, would disappear in twenty five years. If forested, the same land would hold its top soil for 35,000 years - not allowing for soil building from decaying vegetation.

Tuesday, June 1, 1943

152nd Day—213 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## AGRICULTURAL REGIONS



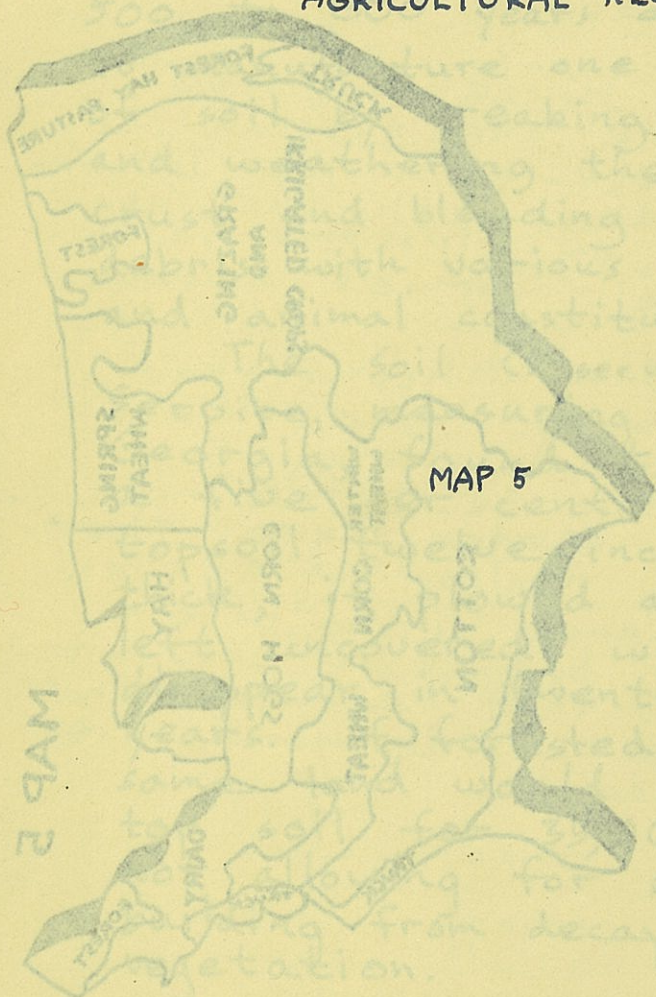


Wednesday, June 2, 1943

153rd Day—212 days to follow

CLEAR
CLOUDY
RAIN
SNOW

AGRICULTURAL REGIONS



Thursday, June 3, 1943

154th Day—211 days to follow

CLEAR
CLOUDY
RAIN
SNOW

DRAFT HORSES

Found on farms and city streets.  
 Height - 15 to 17 hands  
 Weight - 1400 to 2400 pounds  
 Relatively deep, wide, strongly  
 muscled bodies with  
 strong backs and quarters.  
 Leg bones large and strong  
 and legs should be short.  
 Head and neck pleasing but  
 not too heavy and in  
 proportion to body.  
 Compactness and strength  
 Walk and trot should  
 be true and elastic  
 but not so brilliant  
 as in a light horse.

OVER →

Friday, June 4, 1943

155th Day—210 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## DRAFT HORSES

## PERCHERON

Native of La Perche, S.W.  
of Paris in France  
Most desirable colors  
black and grey  
Excellent disposition for  
any kind of heavy work.  
Clean-legged (Hair on legs is short)  
Most common draft horse  
in America.

## BELGIAN

Native of Belgium  
Exceptionally deep and wide  
Heaviest of the draft horses  
Roan, chestnut, and bay most  
common and best color.  
Clean-legged  
Able to withstand hard work  
under unfavorable conditions.  
Great increase in popularity  
in last 20 years.

Saturday, June 5, 1943

156th Day—209 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## DRAFT HORSES

## CLYDESDALE

Native to Scotland  
Bay, black, or brown with  
white feet and white face.  
Rather long, fine hair grows  
from back of legs  
below the knees and hocks.  
Most superior action of  
the draft horses  
Popular in Canada and  
some sections of  
northern U.S.

Sunday, June 6, 1943

157th Day—208 days to follow

I went out to Brookside  
this morning.

Monday, June 7, 1943

158th Day—207 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## BLIGHTED AREAS

1. Crop land areas. 100 million acres of once fertile soil are now eroded beyond hope for livelihood. Other large acreages are depleted.
2. Grassland areas  
165 million acres are on the way to ruin through overgrazing, fire, the plow, dust, and drought. The carrying capacity of grasslands has declined forty to fifty per cent.
3. Forest-land areas  
We have 83 million acres of lifeless land and stranded forest communities with merchantable trees gone.

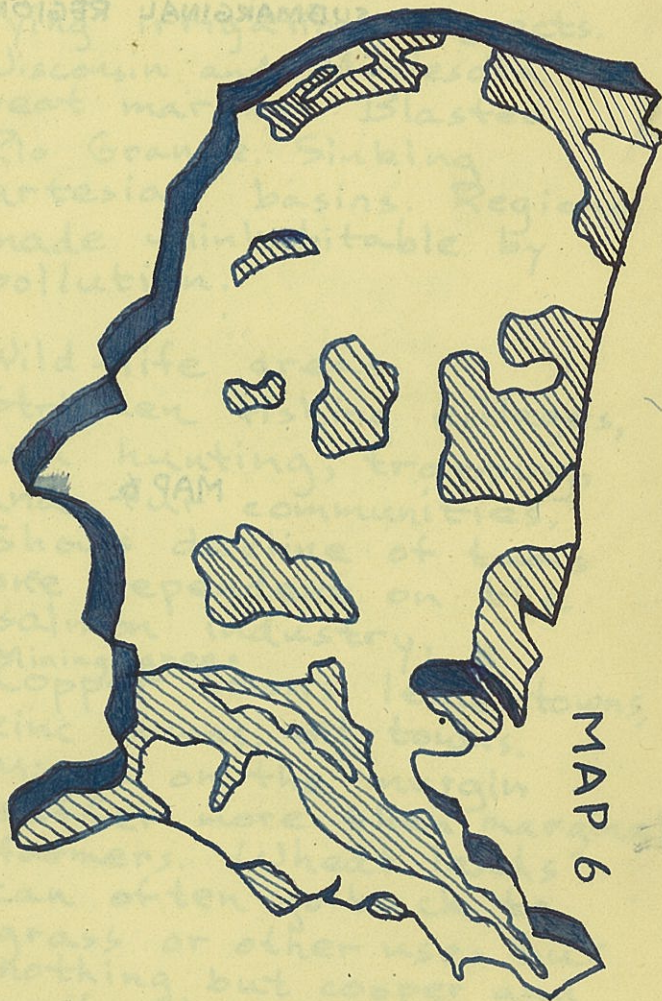
To page 147 →

Tuesday, June 8, 1943

159th Day—206 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## SUBMARGINAL REGIONS

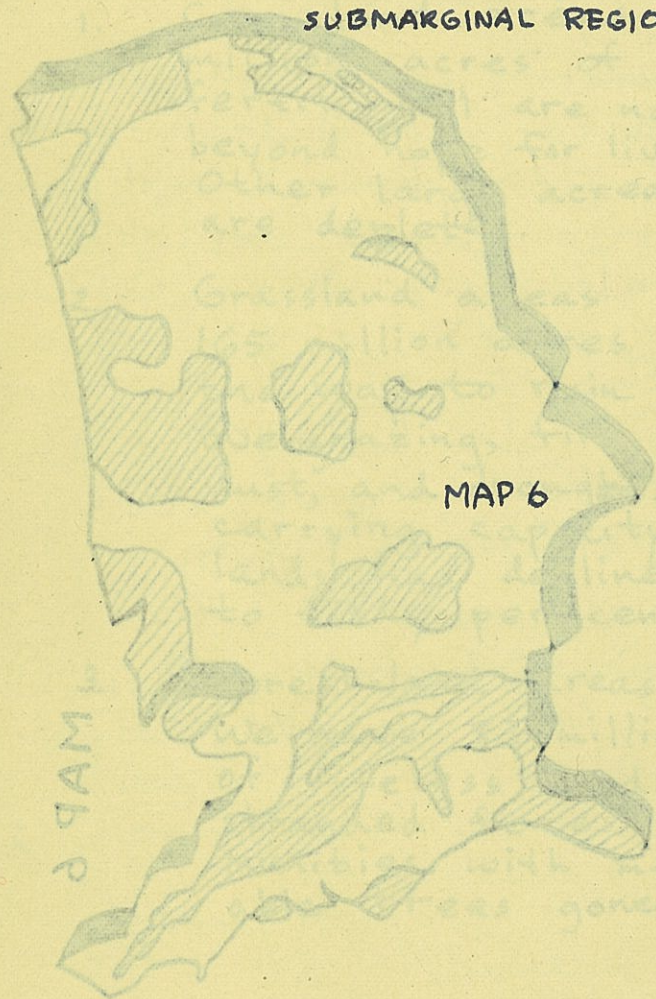


Wednesday, June 9, 1943

160th Day—205 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## SUBMARGINAL REGIONS



MAP 6

Thursday, June 10, 1943

161st Day—204 days to follow

CLEAR
CLOUDY
RAIN
SNOW

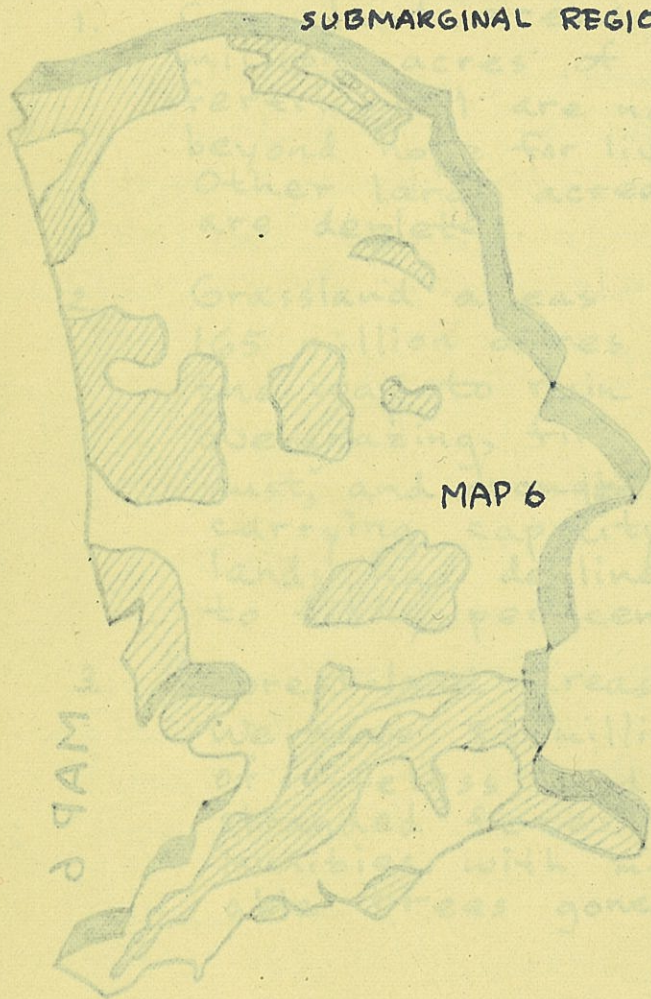
- 4 Watershed areas  
Dying irrigation projects. Wisconsin and Minnesota peat marshes. Blasted Rio Grande. Sinking artesian basins. Regions made uninhabitable by pollution.
- 5 Wild-life areas  
Stricken fishing villages, and hunting, trapping, and fur communities. Shows decline of towns site dependent on the salmon industry.
- 6 Mining areas  
Copper towns, lead towns, zinc towns, oil towns. Miners on the margin suffer more than marginal farmers. Wheat lands can often go back to grass or other uses but nothing but copper and profanity comes out of a copper mine.

Wednesday, June 9, 1943

160th Day—205 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## SUBMARGINAL REGIONS



MAP 6

Thursday, June 10, 1943

161st Day—204 days to follow

CLEAR
CLOUDY
RAIN
SNOW

- 4 Watershed areas  
Dying irrigation projects. Wisconsin and Minnesota peat marshes. Blasted Rio Grande. Sinking artesian basins. Regions made uninhabitable by pollution.
- 5 Wild-life areas  
Stricken fishing villages, and hunting, trapping, and fur communities. Shows decline of towns site dependent on the salmon industry.
- 6 Mining areas  
Copper towns, lead towns, zinc towns, oil towns. Miners on the margin suffer more than marginal farmers. Wheat lands can often go back to grass or other uses but nothing but copper and profanity comes out of a copper mine.

Friday, June 11, 1943

162nd Day—203 days to follow

CLEAR
CLOUDY
RAIN
SNOW

A list of events I can do on the horizontal bar (high bar). This piece of apparatus gives me more of a thrill than any other gym equipment—even tumbling.

## Approaches, Rises, Mounts

1. Single knee rise
2. Front rise
3. Pull up to front stand
4. Back rise
5. Kip

## CIRCLES (Forward + Backwards)

1. Single knee circles
2. Crotch circles
3. Double knee circles
4. Mill's circles
5. Hip circles
6. Heel circles
7. Muscle grinders

→

Saturday, June 12, 1943

163rd Day—202 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Saw a pheasant and about four small rabbits on the way to work this morning.

\* \* \* \* \*

## CUT-OFFS, DISMOUNTS, DROPS

1. Knee drop
2. Front dismount
3. Flank vault dismount
4. Flying knee drop
5. Squat vault dismount
6. Straddle vault dismount
7. Fly-away

Sunday, June 13, 1943

164th Day—201 days to follow

5. "A wise man is strong; yea, a man of knowledge increaseth strength."

Prov. Ch. 24, v. 5

Wednesday, June 16, 1943

167th Day—198 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## REPTILES

SNAKES

EYES	EARS	TEETH	HEART
Protected by coverings but cannot be closed.	No ears on outside. Ear bones inside head	Jaws that will dislocate. Teeth. Some have fangs that fold back	4 chambers Much reflex action Cold blooded
Movable eye lids or protecting fold of thin skin	An opening back of the eye	Gila monster only poisonous lizard in world. Rows of teeth	Cold blooded 4 chambers
		No Rows of teeth Jaws edged with tough horny skin	Cold blooded 4 chambers
		Teeth Powerful jaws	Cold blooded 4 chambers

LIZARDS

TURTLES

CROCODILES

Thursday, June 17, 1943

168th Day—197 days to follow

CLEAR
CLOUDY
RAIN
SNOW

LUNGS	LIMBS	TAILS	SCALES SHELL
Only one lung the left one long tube shape	No legs or feet	Continuation of body	Scales covering whole body
Cold blooded	some have no legs or feet.	In danger most lizards break off their tale	Usually Scales sometimes modified
	Four legs and tail. Used in swimming + on land.	short tail under shell	Hard shell protection over body Eggs take 2-3 months.
	Four legs adapted mostly for water	used as means of protection, food getting	3 inch eggs with hard white shell

Friday, June 18, 1943

169th Day—196 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Modern REPTILES are described and classified as follows:

**CLASS:****REPTILIA:**

5,000 species  
back-boned  
breathes by means of lungs  
4 chambered hearts  
cold-blooded  
ribs + teeth (except tortoises)  
scales or plates  
most have long tails  
Internal fertilization  
shell-covered eggs; some  
living young.

**ORDERS:****CROCODILIA**

(alligators, caymans,  
crocodiles, gavials)  
Four limbed  
Medium or large sized  
4-30 feet in length  
Elongated jaws  
25 species.

Saturday, June 19, 1943

170th Day—195 days to follow

CLEAR
CLOUDY
RAIN
SNOW

**RHYNCHOCEPHALIA**

(The tuatara)

4 footed lizard like  
Only one species  
found in New Zealand

**SQUAMATA**

The lizards and  
snakes divided into  
two sub-orders:

over →

Sunday, June 20, 1943

171st Day—194 days to follow

I am pleased with the good way in which the flower seed is germinating. Most of the flowers planted earlier are beginning to show. Many kinds are several inches tall.



Monday, June 21, 1943

172nd Day—193 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## LACERTILIA

(Lizards)

2 halves of lower jaw  
fused in immovable  
bony suture.

2500 species

most have functional eyelids

## OPHIDIA

(The snakes)

Two halves of jaws  
connected by elastic ligament.

Lack movable eyelids

About 2300 species

## CHELONIA

TERRAPINS (fresh water)

TURTLES (salt water)

TORTOISES (land)

Limb girdles enclosed  
in boxlike rib coverings

About 250 species.

Tuesday, June 22, 1943

173rd Day—192 days to follow

<input checked="" type="checkbox"/> CLEAR
<input type="checkbox"/> CLOUDY
<input type="checkbox"/> RAIN
<input type="checkbox"/> SNOW

We saw a horned lark today. One of the fellows that works on the greens told me he saw a small one yesterday. Flicker, quail, wren, thrasher, robin, swift.

I watched a tiger swallow-tail butterfly this-afternoon as it flitted among some flowers on a large hedge. The cloudless sulphur and the common white cabbage butterfly were also in evidence. (They'll disappear when my friend of last summer, the kingbird, returns.)

A monarch butterfly (milkweed butterfly) was also present. This specie is never bothered by insect-eating creatures because of their acrid blood, which makes them distasteful and undesirable.

Wednesday, June 23, 1943

174th Day—191 days to follow

CLEAR
CLOUDY
RAIN
SNOW

**REPTILES**

## CROCODILIANS

Alligators

Caymans

Crocodiles

Gavials

## THE TUATARA

## LIZARDS

Geckos

Skinks

Old + New World Lizards

Monitors

Poisonous Lizards

Iguanas

Agamas

Chameleons

Worm-like Lizards

## SNAKES

Worm-like snakes

Constrictors

Harmless snakes

Sea snakes

Rear-fanged poisonous snakes

Front-fanged poisonous snakes

Movable-fanged poisonous snakes

Thursday, June 24, 1943

175th Day—190 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## TURTLES

Snapping Turtles

Musk and Mud Turtles

Water Turtles

Land Tortoises

Sea Turtles

Snake-necked Turtles

Soft-shelled Turtles

This is not a scientific or technical classification of "Reptiles" but is merely the table of Contents taken from the book "Reptiles and Amphibians" prepared by the Federal Writers Project, (W. P. A.) of N. Y. City.

Friday, June 25, 1943

176th Day—189 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## Brookside

- I. Landscaping
- A. Flower garden
  - B. Flower borders
  - C. Flower boxes
  - D. Lawn
  - E. Hedges
  - F. Trees
- II. Swimming pool
- A. Chlorine
  - B. Alum
  - C. Soda ash
  - D. Copper sulphate
  - E. Filter beds
- III. Tennis courts
- A. Brushing
  - B. Sprinkling
  - C. Rolling
  - D. Lining

↑

Saturday, June 26, 1943

177th Day—188 days to follow

CLEAR
CLOUDY
RAIN
SNOW

- IV. Engineer
- A. Firing boiler, etc.
  - B. Filter beds
  - C. Plumbing

(Some of my various jobs, in outline form), although it isn't so bad since I have an assistant that takes care of the tennis courts now, and helps out on the lawn and flowers, etc.) In general, does most of the work. What have I said?

Sunday, June 27, 1943

178th Day—187 days to follow

I worked to-day, more or less, he wanted me to stay as a life guard. <sup>Actually,</sup> was swimming and diving most of the time.

Monday, June 28, 1943

179th Day—186 days to follow

CLEAR
CLOUDY
RAIN
SNOW

'The highest knowledge a man can have is to know that he knows nothing—nothing, that is, compared with all that there is to know.'

For this and other other equally great statements this wise man, Socrates, was murdered by his fellow citizens over 2000 years ago.

Tuesday, June 29, 1943

180th Day—185 days to follow

CLEAR
CLOUDY
RAIN
SNOW

This evening after supper I hiked to the woodlands north of town and in the fading twilight watched the whip-poor-wills as they wheeled and darted in the dusk of approaching night. And I marvelled to myself as I realized at that moment how close to Nature and to his Maker one may come, if only for a few minutes he will drop the shrouds of civilization and the ties of modern society and stand <sup>thoughtful</sup> alone—in the handiwork of God.

July 1, 1943

Wednesday, June 30, 1943

181st Day—184 days to follow

CLEAR
CLOUDY
RAIN
SNOW

From the book A.D. 1672 ← 1725

## PETER THE GREAT

by Jacob Abbott

"He differs from other great military monarchs that have appeared from time to time in the world's history in this, that while they acquired their renown by conquests gained over over foreign nations, which in most cases after the death of their conquerors, lapsed again into their original condition, leaving no permanent results behind. The triumphs which Peter achieved were the commencement of a work of internal improvement

↗

Special Data

and reform which is now, after the lapse of more than two centuries, advancing at the present day with perhaps greater and more successful progress than ever before.

"..... the stern severity of Peter's character, the terrible violence of his passions, and the sort of savage grandeur which marked all his great determinations and plans....."

FROM PAGE 168.

## CONSTELLATIONS

The big dipper  
 The little dipper  
 Draco  
 Leo minor  
 Casseopia  
 Cepheus  
 Lyra  
 Bootes  
 Virgo  
 Scorpio  
 Aquila  
 Cygnus (Northern cross)  
 Ophiuchus  
 Corona  
 Hercules

## STARS

Mizar  
 Polaris  
 Regulus  
 Alphecca Caph  
 Vega  
 Arcturus  
 Spica  
 Ahtares  
 Altair  
 Deneb  
 Rasalague  
 Alphecca

Thursday, July 1, 1943

182nd Day—183 days to follow

CLEAR
CLOUDY
RAIN
SNOW

The bobolinks are numerous  
 in the fields.

The flower seeds which  
 I planted this spring  
 have grown into plants  
 of some size. Tuesday  
 I spent some time thinning  
 and transplanting. The  
 dwarf marigolds are in  
 flower, and have been,  
 for some time. The nasturtiums,  
 zinnias and bachelor's  
 button are quite large.  
 Caliopsis which I got from  
 our back yard at home  
 are in flower and several  
 tall tiger lilies are  
 blooming. The plants which  
 I set out as such have,  
 of course been flowering  
 for weeks; periwinkle,  
 ageratum, zinnia, calendula,  
 petunia, and phlox drummondii.

Friday, July 2, 1943

183rd Day—182 days to follow

CLEAR
CLOUDY
RAIN
SNOW

My brother, Bob, is home on leave from the Navy Air Corps. After graduating as second in his class at Hollywood Beach Florida he has been commissioned an ensign. The class contained almost 300 cadets. He is a navigator and as such has had to learn to locate and name 52 stars to use in celestial navigation. He has been teaching me to identify the stars. Last summer I had learned to locate about fifteen constellations.

The following is a list of the stars and constellations that I can positively identify.

TURN BACK TO PAGE 166

Saturday, July 3, 1943

184th Day—181 days to follow

CLEAR
CLOUDY
RAIN
SNOW

I mowed grass, cleaned the swimming pool, took care of the boiler, and edged flower borders today.

\* \* \*

This afternoon I played golf with Roy Schwitzgeble at Lakeside. It's a nice course but there's no comparison with Brookside.

Sunday, July 4, 1943

185th Day—180 days to follow

x Rain

It is quite sultry and it has rained off and on all day. I worked this morning, -again.

Monday, July 5, 1943

186th Day—179 days to follow

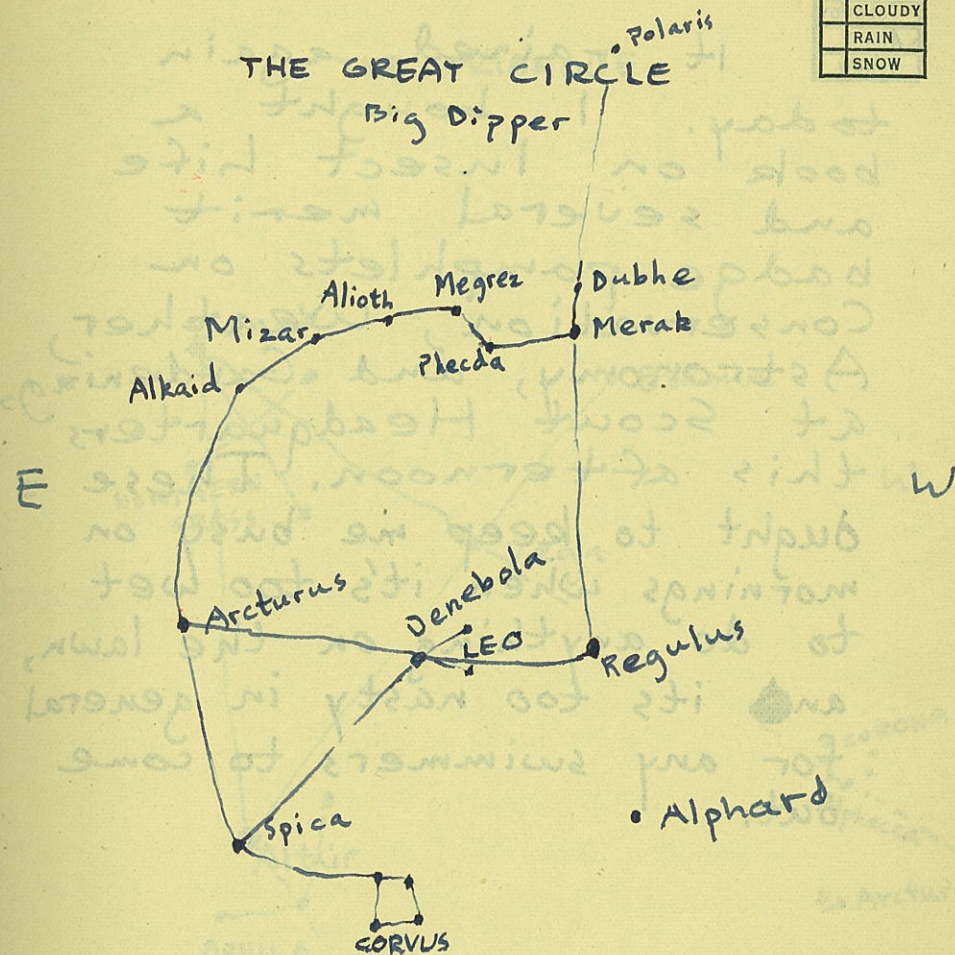
CLEAR
CLOUDY
RAIN
SNOW

After work spike, Fred Stringer and I played tennis down in the park after which we shot the 60 pound Ben Pearson bow being longing to Brookside (I think) which Fred found in the attic. I tried one long distance shot and to my amazement it traveled a hundred ninety yards if it traveled a foot, and I hadn't even pulled the arrow clear back to the point! "Doc" Beck told me the other night that with a hunting arrow you could shoot clear through a bear—and that's no exaggeration.

Tuesday, July 6, 1943

187th Day—178 days to follow

CLEAR
CLOUDY
RAIN
SNOW





Wednesday, July 7, 1943

188th Day—177 days to follow

CLEAR
CLOUDY
✓ RAIN
SNOW

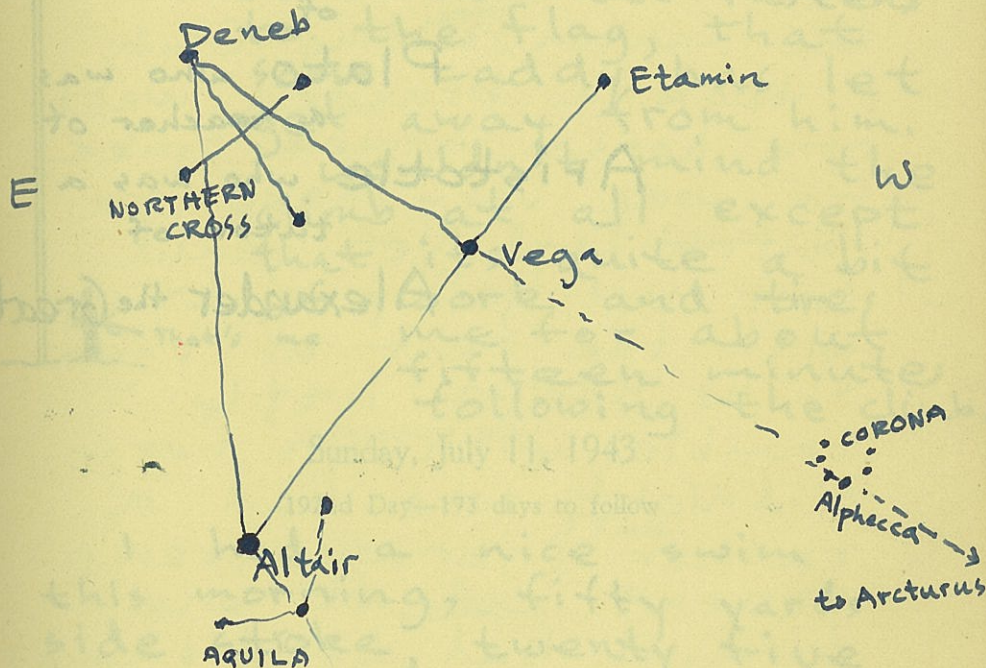
It rained again today. I bought a book on Insect Life and several merit badge pamphlets on Conservation, Weather, Astronomy, and Gardening, at Scout Headquarters this afternoon. These ought to keep me busy on mornings when it's too wet to do anything on the lawn, and it's too nasty in general for any swimmers to come out.

Thursday, July 8, 1943

189th Day—176 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## THE TRIANGLE



Friday, July 9, 1943

190th Day—175 days to follow

CLEAR
CLOUDY
RAIN
SNOW

I noticed an interesting fact in the Book of Knowledge.

Socrates was a teacher of

Plato who was a teacher of

Aristotle who was a tutor of

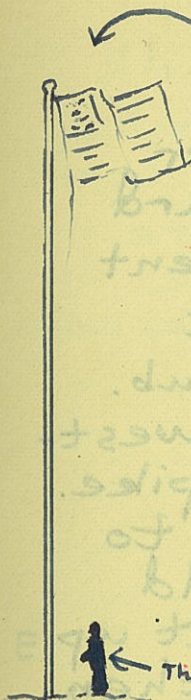
Alexander the Great

Saturday, July 10, 1943

191st Day—174 days to follow

CLEAR
CLOUDY
RAIN
SNOW

(DRAWN TO SCALE)



For the third time this summer I had to climb the fifty foot flag pole to bring down the hook that fastens to the flag, that some caddy has let get away from him. I wouldn't mind the climb at all except that it's quite a bit of work and tires me for about fifteen minutes following the climb.

Sunday, July 11, 1943

192nd Day—173 days to follow

I had a nice swim this morning, fifty yards side stroke, twenty five back stroke, finishing off with a nice fast twenty five yards of Australian crawl.

I was life guard this afternoon, as usual on Sunday.

Monday, July 12, 1943

193rd Day—172 days to follow

CLEAR
CLOUDY
RAIN
SNOW

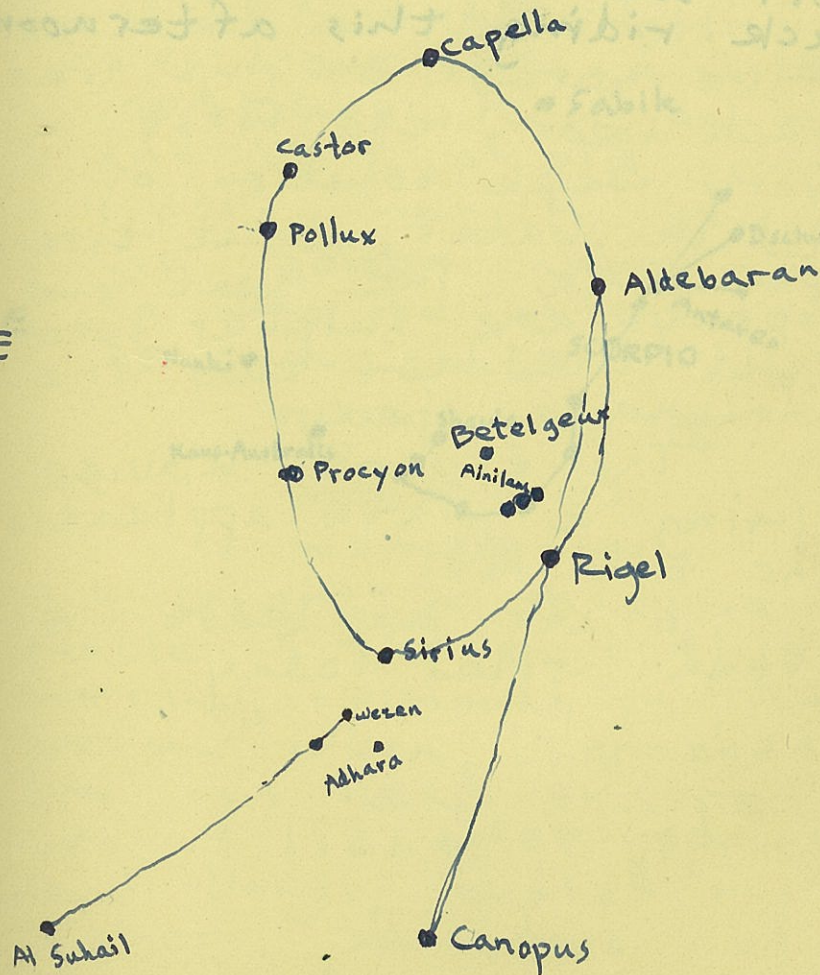
This evening after supper, Shike, Howard Rosenthal, and I went horse back riding at the Canton Riding Club. I took a branded western horse named Spike. He was very easy to control and yet could trot and gallop right up with the rest of them. Shike had a little trouble with his horse, Midnight, who had a rather nervous temperament and at one time, I had to dismount and help quiet his horse before he could remount.

Tuesday, July 13, 1943

194th Day—171 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## ORION'S BELT



Wednesday, July 14, 1943

195th Day—170 days to follow

CLEAR
CLOUDY
RAIN
SNOW

I caught a milk snake this morning, near the pool.

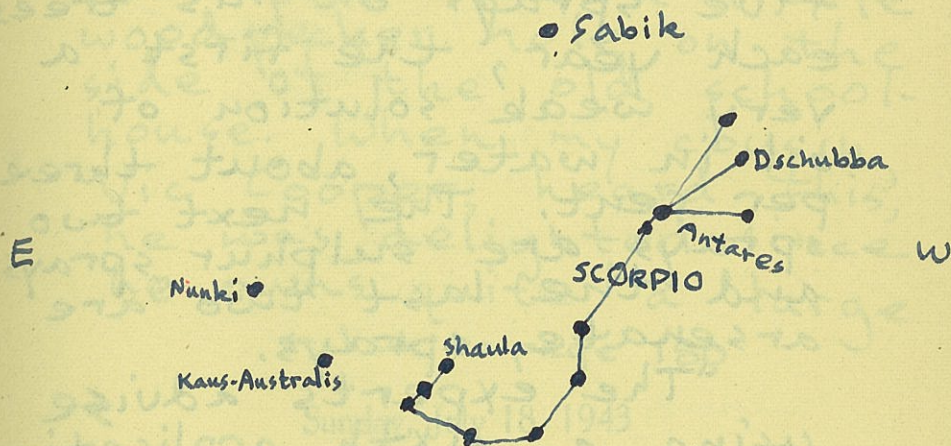
We played miniature golf and went horse back riding this afternoon

Thursday, July 15, 1943

196th Day—169 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## THE SCORPION



Friday, July 16, 1943

197th Day—168 days to follow

CLEAR
CLOUDY
RAIN
SNOW

From page 181

apple orchard and the bees help in the pollination of the flowers.

He told me he uses five sprays on his trees each year, the first a very weak solution of oil in water, about three per cent. The next two sprays are sulphur sprays and the last two are arsenate sprays.

"The experts advise using a sixth application," he told me.

I ate at least fifteen apples today.

Saturday, July 17, 1943

198th Day—167 days to follow

CLEAR
CLOUDY
RAIN
SNOW

My Dad and I niked this afternoon in the woods and fields near where he grew up as a boy (between Waynesburg and Magnolia). I watched hundreds of bees pour into a little woodpecker hole on the side of the old schoolhouse. When my cousin Vic Cooper, heard this, he was delighted since he owns quite a large

← back to page 180

Sunday, July 18, 1943

199th Day—166 days to follow

I caught a snapping turtle in the pool this morning, swimming on the bottom. When I grabbed him his head snapped around like a steel spring and barely missed my fingers. Saw two red shouldered hawks,

over →

Monday, July 19, 1943

200th Day—165 days to follow

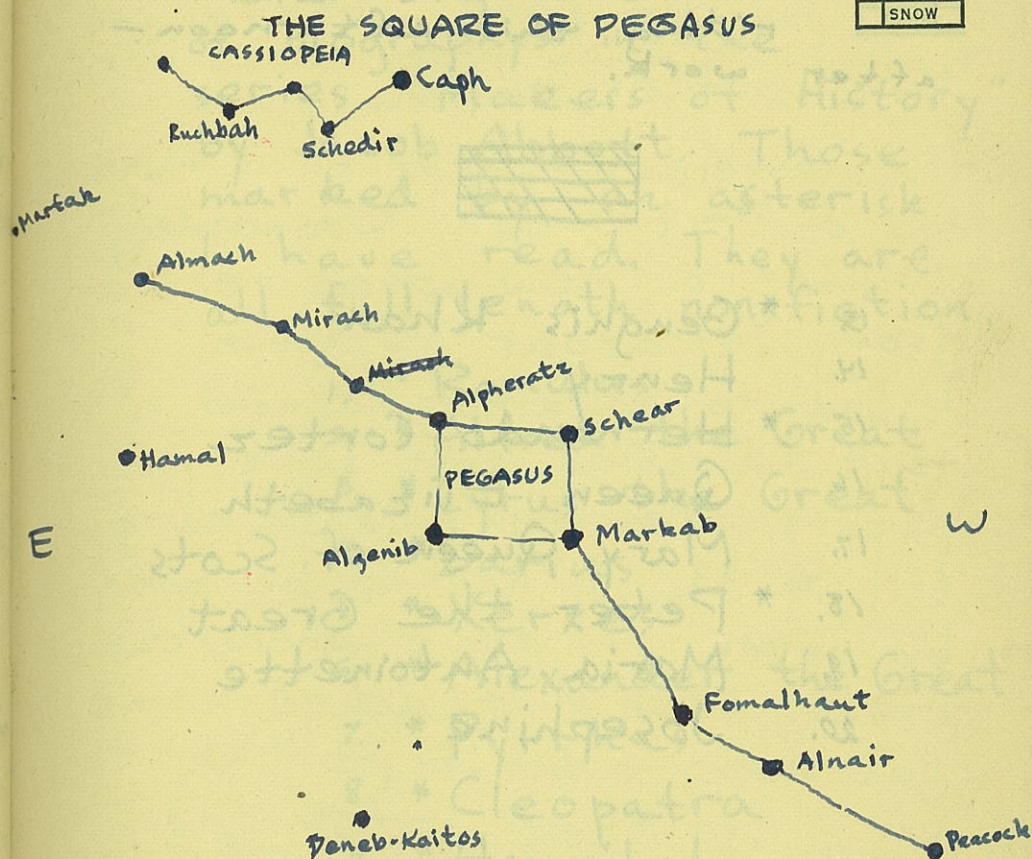
CLEAR
CLOUDY
RAIN
SNOW

I played tennis and shot my bow and arrow<sup>s</sup> after work today. Russell and Raymond are at Tuscazoar.

Tuesday, July 20, 1943

201st Day—164 days to follow

CLEAR
CLOUDY
RAIN
SNOW

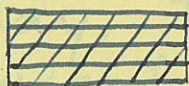


Wednesday, July 21, 1943

202nd Day—163 days to follow

CLEAR
CLOUDY
RAIN
SNOW

I went horse back riding this afternoon—after work.



13. \* Genghis Khan
14. Henry
15. \* Hernando Cortez
16. Queen Elizabeth
17. Mary Queen of Scots
18. \* Peter the Great
19. Maria Antoinette
20. Josephine

Thursday, July 22, 1943

203rd Day—162 days to follow

CLEAR
CLOUDY
RAIN
SNOW

The following is a list of biographies in the series "Makers of History" by Jacob Abbott. Those marked by an asterisk I have read. They are all full length non-fiction.

1. \* Romulus
2. \* Alfred the Great
3. \* Cyrus the Great
4. \* Darius
5. \* Xerxes
6. \* Alexander the Great
7. \* Pyrrhus
8. \* Cleopatra
9. \* Hannibal
10. \* Julius Caesar
11. \* Nero
12. William the Conqueror

Friday, July 23, 1943

204th Day—161 days to follow

CLEAR
CLOUDY
RAIN
SNOW

I went bowling tonight. I couldn't think of anything better to do.

Yesterday—what am I thinking of?—I mean Wednesday I made a new speed record from Tuscaroar to home.

I had to go after Raymond so that he could sign some papers. We didn't leave camp till 6:33. I had to be home by seven. I don't know the exact time I reached home but we made it to the city limits in twenty six minutes. Dad took Raymond back Thursday.

Saturday, July 24, 1943

205th Day—160 days to follow

CLEAR
CLOUDY
RAIN
SNOW

I went bowling this afternoon. Russell and Raymond are back from Scout Camp.

Sunday, July 25, 1943

206th Day—159 days to follow

Benito Mussolini, Il Duce (The Leader) who gave Italy her greatest modern empire under his Fascist dictatorship, and then lost it all in a mad gamble for additional lands, ended

→



Monday, July 26, 1943

207th Day—158 days to follow

CLEAR
CLOUDY
RAIN
SNOW

All Italy placed under martial law by Mussolini's successor Badoglio. Il Duce reported to be in army custody. Hint of withdrawal from war heard.

July 25, 1943

his career tonight with his "resignation," 20 years and 9 months, lacking four days from the time of his famous Blackshirt march on Rome that made him Premier and dictator.

\* \* \*  
"Better to live a day as a lion than 100 years as a sheep"

The motto of Benito Mussolini which he ordered inscribed on Italy's 20 lire coin.

\* \* \*

→

Tuesday, July 27, 1943

208th Day—157 days to follow

CLEAR
CLOUDY
RAIN
SNOW

MUSSOLINI HAS RULED ITALY WITH IRON HAND FOR 21 YEARS

Born July 29, 1883

Won leadership of most extreme element in Socialist party at Forli when 27  
On March 23, 1919 at Milan organizes the "Fasci Italiani di combattimento"

Oct. 28, 1922 enters Rome after delivering ultimatum "Give us power peacefully or we will take it by force."

A month later becomes Dictator  
Reconciliation of church and state on July 25, 1929.

In 1935 defies League of Nations by waging war on Ethiopia and taking it after 7 months fighting.

→

Wednesday, July 28, 1943

209th Day—156 days to follow

CLEAR
CLOUDY
RAIN
SNOW

v.3  
We went bowling tonite,  
and then later to  
Meyer's lake. No wonder  
we had such lousy luck. No.  
13!

. . .

continued from pg. 189

In 1938 Germany invades  
Austria. Mussolini hails move.

In Sept. 1938, Hitler's ally  
at Munich Conference.  
Prime Minister Chamberlain  
and Premier Daladier present.  
Hitler takes Czechoslovakia.

April 7, 1939, 30,000 Italian  
troops land at Albania  
ports. King Zog chased  
from throne. Italy takes over.

As Allied nations gather  
strength in 1942 Muss-  
olini fades into back-  
ground.

July 25, 1943 resigns, lacking  
a few days of being  
60 years old.

Thursday, July 29, 1943

210th Day—155 days to follow

CLEAR
CLOUDY
RAIN
SNOW

I went swimming most  
of the day, - diving with  
an ordinary scrub brush  
and cleaning the bottom of  
the pool where the sweeper  
can't get at the dirt.

From page 122

Or are they just beginning. Am I  
a dumb cluck. I've known ~~her~~ her  
for two years and I'm just beginning  
to realize how swell she really  
is. I've always thought she's  
pretty (such an understatement)  
but there's something about her  
that's different from other girls.  
For some reason I want her to  
like me and know the way I  
think and the reasons for it.  
I would do anything for her.

Marye - Ann, I mean it.

Dick

Friday, July 30, 1943

211th Day—154 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Today is the sixtieth birthday of the man who liked to consider himself a modern Caesar, Benito Mussolini.

o o o

The Re has been inactive for quite some time. A council meeting should be called; inactive members of the tribe dropped, new members chosen and initiated, and a new chief and medicine man chosen, or at least voted in again.

Several things need revising or changing—first and most important the powers and limitations

→

Saturday, July 31, 1943

212th Day—153 days to follow

CLEAR
CLOUDY
RAIN
SNOW

The care of gladiolas.  
To combat the "thrip."

Spray with tartar emetic mixed with brown sugar

Spray only when you see the bug.  
Spray at least four times in the summer.

## Special Data

of the chief. His powers should be definitely stated. Proposed powers of the chief as I see them:

1. Must be elected by a unanimous vote of Cil Ring, for an indefinite period of time.

→

## Special Data

2. Chief cannot be deposed except by unanimous vote of Cil Ring.
3. Chief presides over all Cil Rings, should give his opinion, if he desires, on any question, but has no vote except in case of tie.
4. To change any of the laws or code  
(cont. on page 201)

Sunday, August 1, 1943

213th Day—152 days to follow

Psalm 8; v. 3, 4

"When I consider thy heavens,  
the work of thy fingers, the  
moon and the stars, which thou  
hast ordained;

"What is man, that thou art  
mindful of him? and the son of  
man, that thou visitest him?"

Monday, August 2, 1943

214th Day—151 days to follow

CLEAR
CLOUDY
RAIN
SNOW

The AMPHIBIANS of today  
are described and classified  
as follows.

**CLASS:**

**AMPHIBIA**

1800 living species  
All backboneed, respiring  
chiefly through skin.  
3 chambered hearts  
Cold blooded  
Hibernate in winter  
Covered with glandular skin  
some smooth, some rough  
Deposit eggs in water  
With but few exceptions  
they pass through an  
aquatic larval stage.  
Never covered with calcareous  
shell (the eggs).

**ORDERS:**

**GYMNOPHIONA**

Limbless, worm-like, short  
tailed coecilians  
19 genera, and 50 odd species  
Generally distributed  
throughout tropics  
except for Madagascar.

Tuesday, August 3, 1943

215th Day—150 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## CAUDATA

4 limbed, tailed  
salamanders + newts

150 kinds

Most temperate and  
tropical climates

## SALIENTIA

long, hind-limbed, tailless  
frogs and toads

1600 species

Scattered throughout  
temperate and  
tropical regions.

Wednesday, August 4, 1943

216th Day—149 days to follow

CLEAR
CLOUDY
RAIN
SNOW

✓<sub>14</sub> We went horseback  
riding to nite. I  
had a swell horse  
and really had him going.  
We went to "Bit and  
Spur."

Thursday, August 5, 1943

217th Day—148 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## CATTLE

There are about 20 different types of cattle in America, varying greatly in size, shape, and color. Roughly, they can be classified into three classes;

## I DAIRY TYPE

Jersey  
 Holstein-Friesian  
 Guernsey  
 Ayrshire  
 Brown Swiss



Friday, August 6, 1943

218th Day—147 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## II BEEF TYPE

Shorthorns  
 Herefords  
 Aberdeen-Angus  
 Galloway

## III DUAL-PURPOSE TYPE

Red-polled  
 Milking shorthorn

Saturday, August 7, 1943

219th Day—146 days to follow

CLEAR
CLOUDY
RAIN
SNOW

I was talking to a gardener the other day. He said that this is the way he prepares his flower beds in the spring. (fertilizing)

A phosphate potash mixture in the ratio of 3 to 1; 25 pounds per 1000 square feet.

Sunday, August 8, 1943

220th Day—145 days to follow

I worked 14 hours today. Saw two hawks and one that has me stumped, the first one in a long time. I'll have to look it up. I went swimming quite a bit. (Red-shouldered hawks) It was a green heron.

Monday, August 9, 1943

221st Day—144 days to follow

CLEAR
CLOUDY
RAIN
SNOW

I had car trouble tonite.

oooooooo

(cont. from page 194)

of the Re his consent plus a majority <sup>vote</sup> of the Cil Ring must be had.

5. On all hikes, camping trips, initiations, and meetings the chief is undisputedly in charge.
6. The chief appoints the Ug and at any time can recall or install a new ug, however the ug must be at least a warrior or brave.

Tuesday, August 10, 1943

222nd Day—143 days to follow

CLEAR
CLOUDY
RAIN
SNOW

I was driving a Model T Ford tonite, year about 1917. It's like learning to drive all over again.

o o o o o

A restatement of the Re Book was accepted stating the priveleges and limitations of a cil member.

"The privilege of a cil member is to cast one vote on each of the following issues:

1. War
2. Punishment
3. Election of chief
4. Expulsion of Din
5. Recognize advancement
6. Depose chief or ug
7. Charge the Re Book
8. These rights and no more except in an advisory capacity.

Wednesday, August 11, 1943

223rd Day—142 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Sid's cousin Elmer was visiting Sid tonite before leaving for the army. I went on a camping trip with him a couple of summers ago, to the gorge near North Industry, on a brave's hike.



Thursday, August 12, 1943

224th Day—141 days to follow

CLEAR
CLOUDY
RAIN
SNOW

The butterflies seem unusually numerous this summer. The kingbird that lived near the tennis courts last summer hasn't been in evidence; perhaps this partially accounts for the fact. The commonest are the following:

Monarch  
 Viceroy  
 Cabbage  
 Cloudless sulphur  
 Tiger swallowtail  
 Black swallowtail  
 Silver spotted skipper

Friday, August 13, 1943

225th Day—140 days to follow

TORNADO

An unlucky day for lots of people.

CLEAR
CLOUDY
<input checked="" type="checkbox"/> RAIN
SNOW

Canton had the first real tornado of its history, at least to my knowledge, tonight. The rain came down in waves—step out in it for about 2 seconds and you're soaked. Lightning flashed and hit several factories. In the south west end roofs were torn off, trees uprooted, several houses knocked off their foundations, wires down, all kinds of damage.

I checked with a "Weather" pamphlet I have and to do the kind of damage the "twister" did it must have been at least a 70 mile wind!

The miraculous thing was that only one person was killed.

Saturday, August 14, 1943

226th Day—139 days to follow

CLEAR
CLOUDY
RAIN
SNOW

I went to the S. W. end tonight to see the damage the tornado caused. It's even worse than the rumors. Brick buildings leveled to the ground.

Six bridges were washed out at Brookside. (Foot bridges) The creek was still up almost to my waste this afternoon, when, with the aid of a couple of tractors and several boys we put the bridges in again.

Sunday, August 15, 1943

227th Day—138 days to follow

... "for a man's life is not measured by the abundance of the things which he possesseth."

Ruby throated hummingbird  
Red headed woodpecker  
Kingbird

Monday, August 16, 1943

228th Day—137 days to follow

CLEAR
CLOUDY
<input checked="" type="checkbox"/> RAIN
SNOW

More rain. I worked on flower boxes most of the morning.

This evening I went to Cook's Woods.

\* \* \*

Aug. 17-25, 1943

Churchill-Roosevelt-King meet at Quebec Conference

\* \* \*

Tuesday, August 17, 1943

229th Day—136 days to follow

CLEAR
CLOUDY
RAIN
SNOW

I saw a marsh hawk at fairly close range early this morning on the way to work.

## INSECTS

Mosquito	Common black ant
Honey bee	Common red ant
Bumble bee	Daddy long legs
Plant lice	Ant lion
House fly	Inch-worm
Dragon fly	Gall insects
Horse fly	Bee flies
Common flea	Yellow jacket
Wasp	Fire flies
Hornet	Japanese beetle
Cockroach	Lady bird beetle
Grasshopper	
Katydid	
Cricket	
June bug	

Wednesday, August 18, 1943

230th Day—135 days to follow

CLEAR
CLOUDY
RAIN
SNOW

I went on a hike today, visiting Cook's Woods and the Land of the Delawares. The summer wild flowers are at their height with the bright orange of the goldenrod, the white daintiness of Queen Anne's lace and the yellow of butter and eggs—and the splashes of color, as a large black swallowtail, or a brilliantly marked monarch flutter past, lend that touch of life, vibrant and possessing, that ~~tends~~ adds so much to any scene.

Thursday, August 19, 1943

231st Day—134 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## INSECTS ~ ~ ~ ~ ~

(some of the commonest species)  
excluding LEPIDOPTERA (butterflies + moths)

common mosquito (culex)

honey bee

bumble bee

plant lice

gall insects (gall wasp, for ex.)

house fly

dragon fly

damselfly

horse fly

common flea

wasp

hornet

cockroach

grasshopper

katydid

cricket

June bug (beetle)

cont. on next pg. →

Friday, August 20, 1943

232nd Day—133 days to follow

CLEAR
CLOUDY
RAIN
SNOW

continued

Common black ant

Common red ant

Daddy long legs (spider)

Ant lion

Inch worm

Bee flies

Yellow jacket

Firefly

Japanese beetle

Scavenger beetle

Lady bird beetle

Common stag beetle (pinching bug)

Back swimmers

Water boatmen

Water striders

Centipedes

Fig eater

Saturday, August 21, 1943

233rd Day—132 days to follow

CLEAR
CLOUDY
RAIN
SNOW

I've been looking for a patch of catnip for several weeks; <sup>one</sup> that is fairly near to home. I finally found some.

LABIATAE; Mint family

Nepeta; Catnip

N. Cataria (Linn.) Common catnip

Pubescent. Erect 2-3 ft.

Leaves cordate-ovate, crenate, greyish

Corolla tinted

Flowers in interrupted spikes

Sunday, August 22, 1943

234th Day—131 days to follow

"The Lord is my shepherd; I shall not want.

2. He maketh me to lie down in green pastures: He leadeth me beside the still waters."

Psalm 23

Monday, August 23, 1943

235th Day—130 days to follow

CLEAR
CLOUDY
RAIN
SNOW

WEDNESDAY, AUGUST 25

The Re had a campfire tonight on the Mesa. Pitamaken kept a signal fire on the west hill of Twin Hills.

The purpose of this fire was to warn Otter and Lightning Deer to change their course toward the Mesa. Beaver built the campfire. Sinopah, the only remaining <sup>member of the council?</sup> ~~the~~, was also present.

After a celebration with plenty of food the Council Ring held a meeting to decide on certain issues.

The powers and limitations of the chief were definitely passed (by a unanimous

Tuesday, August 24, 1943

236th Day—129 days to follow

CLEAR
CLOUDY
RAIN
SNOW

vote) exactly as written on page 193. "Schnitz" was voted out. R. W. is still considered a member—although inactive.

Lightning Deer and Beaver resigned. Pitamakan was elected the new chief. The medicine man he chose, was Sinopah.

Although the Re wants new members no name submitted was considered worthy of election.

Wednesday, August 25, 1943

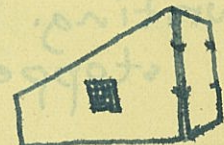
237th Day—128 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Russell has pitched my tent in a field near the orchard.



For winter camping the fly is used as a reflector, (in really cold weather)



When the nights are cool the tent flap is left closed.

This type of tent is known as the forester's tent. It is especially desirable for a semi-permanent camp. Mine also has a floor on it which makes it very nice in wet weather. There is room for four on the ground or two in cots.

Thursday, August 26, 1943

238th Day—127 days to follow

CLEAR
CLOUDY
RAIN
SNOW

This evening I took a stroll around the house, passed the garden, and continued down the alley about one hundred yards, noticing and marking down the plants observed. I met a friend at this point and discontinued writing. The list stops where I stopped.

Spyrreha  
 Coleus  
 Lawn grass  
 White clover  
 Soft maple  
 Barberry  
 Caliopsis  
 Rambler roses  
 Common plantain  
 Yellow wood sorrel  
 Forsythia →

Friday, August 27, 1943

239th Day—126 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Dutchman's pipe  
 Cherry  
 Grape  
 Apple  
 Peach  
 Dandelion  
 Solomon's seal  
 Lily-of-the-valley  
 Rose  
 Viscetaria?  
 Ground ivy  
 Red beet  
 Zinnia, large flowering  
 Zinnia, liliput  
 Tomato  
 Gladiola  
 Lettuce  
 Rhubarb  
 Bachelor's button  
 Hollyhock  
 Salvia  
 Daffodil  
 Aster  
 Peony →

Saturday, August 28, 1943

240th Day—125 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Phlox drumondii  
 Phlox  
 Lily  
 Catalpa  
 Sumac  
 Shooting star  
 Wandering Jew  
 Giant dock  
 Lamb's quarter  
 Ragweed  
 Giant bedstraw  
 Shasta daisy  
 Sunflower →

Sunday, August 29, 1943

241st Day—124 days to follow

31. "Another parable put he forth unto them, saying, The kingdom of heaven is like to a grain of mustard seed, which a man took, and sowed in his fields:

32. which indeed is the least of all seeds: but when it is grown, it is the greatest among herbs;

38. The field is the world; →

Monday, August 30, 1943

242nd Day—123 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Sycamore  
 Norway maple  
 Common blue violet  
 Dilanthus (Tree-of-heaven)  
 Shield fern

○—○ ○—○  
 Monday, August 30, 1943

We had an initiation tonight.

It was held at the campfire on the hill. The mosquitoes were terrible but the ceremony was impressive.

==  
 the good seed are the children of the kingdom; —

st. Matthew, chapter 13.



Tuesday, August 31, 1943

243rd Day—122 days to follow

CLEAR
CLOUDY
RAIN
SNOW

VI.

B. Aqueous agencies

Closely connected with atmospheric agencies. The two together Leveling agencies

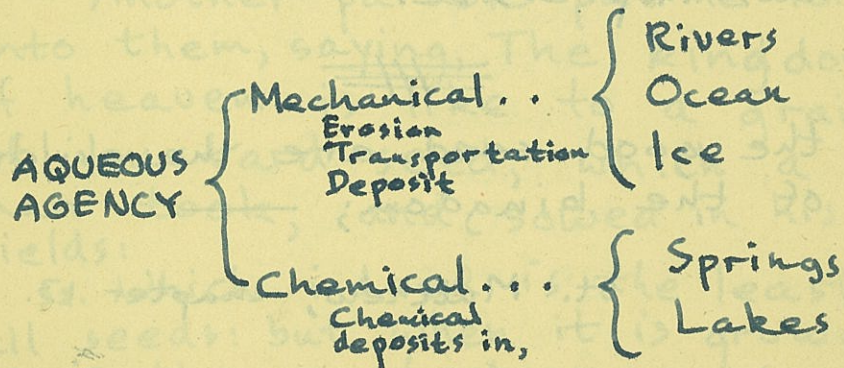
1. Water in soil making is an atmospheric agency
2. Water in soil removal is an aqueous agency

## 1. Mechanical agency of water

- a. rivers
- b. ocean
- c. ice

## 2. Chemical agency

- a. springs
- b. lakes



⑥

→

Special Data

VII.

## 1. Erosion of rain and rivers

- a. Universal rain erosion
- b. Stream erosion (concentrated on a single line)
- c. Never reappears on the surface but finds its way by subterranean passages to the sea

By estimate: All land surfaces cut away at the rate of one foot in 3000 - 5000 years.

Falls cut back

Canyons formed

Mesas formed

Gorges formed

Plateaus formed

Pot holes made by whirling eddies

## 2. Transportation and distribution of sediments

General Law: All deposits in water are stratified.

- a. Rivers seek to reach the base-level of erosion where they neither cut deeper or drop deposit. Then the river starts to get wider. The topography is old. Rivers

⑦

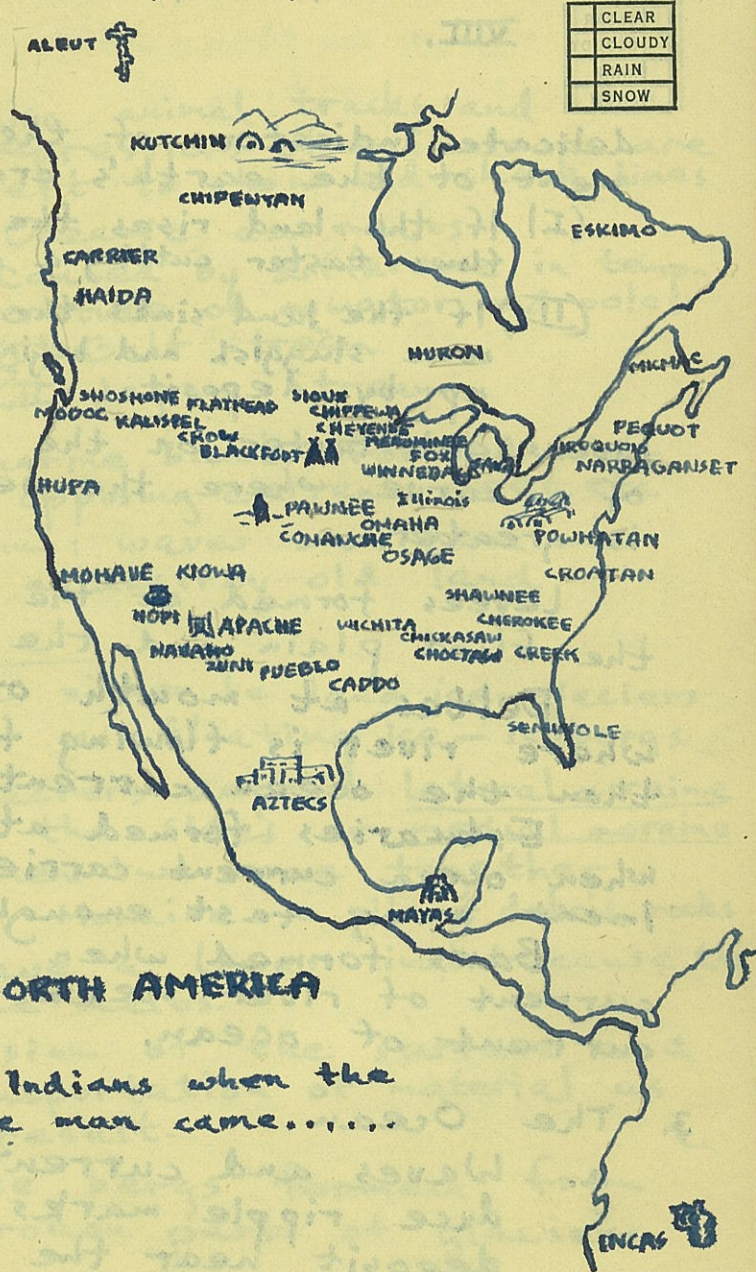
To page 224

THE INDIAN POPULATION  
north of Mexico in 1630<sup>+</sup>

United States proper	849,000
British America	221,000
Alaska	73,000
Greenland	10,000
<b>TOTAL</b>	<b>1,153,000</b>

+ According to James Mooney

244th Day—121 days to follow



Thursday, September 2, 1943

245th Day—120 days to follow

CLEAR
CLOUDY
RAIN
SNOW

VIII.

delicate indicators of the movement of the earth's crust.

- (I.) If the land rises the water flows faster cutting a deep gorge
- (II.) If the land sinks the rivers become sluggish and begin to build up by deposit

Rivers cut faster on the outside of a curve where the velocity is greater.

Leveres formed at the edge of the flood plain and the river.

Deltas at mouth of stream where river is flowing faster than the ocean current.

Estuaries formed at mouth when ocean current carries sediment away fast enough. (by tides, etc.)

Bars formed when outgoing current of river meets incoming current of ocean.

## 3. The Ocean

- a. Waves and currents produce ripple marks on the deposit near the sea shore.

⑧

Friday, September 3, 1943

246th Day—119 days to follow

CLEAR
CLOUDY
RAIN
SNOW

IX.

also animal tracks and impressions of rain drops are left to show old shore lines

- b. Oceanic currents  
Caused by difference in temperature of equator and poles
- (I) Gulf stream  
(II) Japan stream

Submarine banks formed when two opposing currents meet, etc.

Thus: waves can form new land + destroy old land.

4. Ice

can either be land ice—glaciers or as floating ice—icebergs

||glaciers deposit lateral moraine on the sides or medial moraine when two come together

Moraine—a pile of debris, rocks

Have a lower limit because the ice melts.

Erosion of the surface and transportation of material as a result.

Ice bergs formed from broken parts of glaciers.

⑨

To page 268 →

Thursday, September 2, 1943

245th Day—120 days to follow

CLEAR
CLOUDY
RAIN
SNOW

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⑨

To page 268 →

Saturday, September 4, 1943

247th Day—118 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Went to Meadville, Penn.

I'm writing this long after the trip but I can recall almost exactly what the town was like and the scenery on the way.

School starts next week.

SEPT. 3, 1943

Allies invaded the mainland of Italy in the early morning.

Signing of an armistice in the afternoon (secret military armistice) by representatives of the Badoglio Administration, effective Sept. 8.

Sunday, September 5, 1943

248th Day—117 days to follow

Red army reports Stalino in flames.

Psalm 5, 1

"Give ear to my words, O Lord, consider my meditation."

Monday, September 6, 1943

249th Day—116 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## SPRING FLOWERING BULBS

## I. Uses of bulbs

A. To extend the season of bloom

B. Used in bedding for mass color effect

1. Necessary to follow the bulbs with other kinds of plants for remainder of season

a. Geraniums

b. Heliotropes

c. Petunias

d. Chinese asters

e. Some other kind of annual

2. Underplanting or ground covers sometimes used with pleasing color effects (especially with Darwin tulips)

a. Pansies

b. English daisies

c. Moss pink

d. Blue phlox

e. Varieties of tufted pansies

C. Used in herbaceous borders and gardens

1. Groups of bulbs among perennials

a. Columbines

b. Peonies

c. Phlox

Tuesday, September 7, 1943

250th Day—115 days to follow

CLEAR
CLOUDY
RAIN
SNOW

- d. Delphinium  
e. Numerous others

D. Used in rock gardens

1. Scillas
2. Glory of the Snow
3. Crocus
4. Snowdrops
5. Some Narcissi + tulips

E. Used in "naturalizing"

1. Attempt to imitate nature in location of bulbs

F. Used in spring bulb gardens followed by annuals

G. Used for cut flowers

II. Bulb structure and its relation to bulb care

A. Definition: An underground structure, composed of a bud (the new plant in a miniature form), surrounded by scales which are modified leaves.

1. The bud must be present when planted to secure flowers the following season

Soviets took Stalingrad today. Hostilities with Badoglio proclaimed at an end. 229

Wednesday, September 8, 1943

251st Day—114 days to follow

CLEAR
CLOUDY
RAIN
SNOW

2. The bulb scales fulfill two functions

a. Protection

b. Food storage

(E) To supply food for growth until it can establish its own root system

B. The corm: a solid structure not composed of overlapping scales; a thickened underground stem from which arise leaves and flowers

1. Crocus
2. Gladiolus

\*

C. Principles to remember in bulb care

1. A bulbous plant must be allowed to produce and mature its foliage if the plant is to put forth flowers annually
2. Bulbs should be kept in a cool, dry place with out serious damage
3. It is best to protect bulbs over the winter (in the ground) with leaves, but not manure. (The rapid decomposition can be very harmful to the bulbs).

Thursday, September 9, 1943

252nd Day—113 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## D. Qualities desired in a good bulb

## 1. Firmness

- a. Lack of firmness probably caused by exposure to warm air

## 2. Maturity

- a. An immature tulip is greenish under the scales, a well ripened and cared for one is white. Hyacinth and narcissi outer scale coverings should be well ripened

## 3. Freedom from insect pests and diseases

- a. Comparative lack in bulbs

## III Planting, care, and culture of hardy spring flowering bulbs

## A. Planting time

1. Late September to late October or early November depending on the season

- a. If planted late a hay, or leaves mulch will keep the frost out and give the bulbs a chance to make a few roots
- b. Extremely late planting not desirable

→

Friday, September 10, 1943

253rd Day—112 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## 2. Preparation of soil

- a. Spaded to depth of 9-12 inches
- b. If bed was used by bedding plants in summer, bonemeal should be mixed in at rate of one pound to 20 or 25 square feet of surface

- c. On heavy clay soils leafmold (or sand if leafmold is not available) should be added.

(I.) Makes the soil more light.

- d. Light, sandy soils should have leafmold added

(I.) To retain moisture

- e. If manure is used it should be well rotted (Bonemeal in fall and manure in spring, for bedding plants is a good system)

## B. Two common methods of planting

1. Spaced on the surface
2. Excavating whole bed to some depth
- a. For making complicated designs

→

Saturday, September 11, 1943

254th Day—111 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## C. Mulching desirable

1. To protect plants from alternate freezing and thawing
2. Not a necessity
3. Grass, hay, or leaves are satisfactory
4. Should be removed if bulbs start to come up through the soil
  - a. A burlap or evergreen bough protection on cold nights helps
  - b. Sprinkling of cold water after a hard freeze can help to draw out the frost →

Sunday, September 12, 1943

255th Day—110 days to follow

Mussolini was kidnapped from the allies by German S. S. men.

Psalm 119, 116

"Uphold me according unto thy word, that I may live: and let me not be ashamed of my hope."

Monday, September 13, 1943

256th Day—109 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## D. Cultivation in spring

1. Not absolutely essential
  - a. Improves appearance
  - b. Holds water
2. Applying of acid phosphate (2-4 oz. per sq. yd.) when bonemeal was not used in fall proves beneficial
3. During growing period bulbs require practically no attention
4. Removal of faded flowers
  - a. Conserves plants energy
  - b. Improves appearance
5. Allow foliage to remain undisturbed

## E. Frequency of digging up bulbs in permanent locations

1. When they become so thick to produce only leaves
  - a. Dig up
  - b. Divide
  - c. Replant
2. Time to dig up bulbs
  - a. In fall at proper time
  - b. After bulbs get ripe in July
 (I) Replant in fall →



Tuesday, September 14, 1943

257th Day—108 days to follow

PLANTING OF

BULBS

CLEAR
CLOUDY
RAIN
SNOW

BULB	DEPTH Surface to top of bulb	DISTANCE APART
Anemone	2 in.	4-6 in.
Crocus	3 in.	2 in.
Snowdrop	3 in.	2 in.
Scilla	3 in.	3 in.
Jonquil	4 in.	6 in.
Tulip	4 in.	4 in.
Hyacinth	5 in.	6 in.
Narcissus	5 in.	6-12 in.
Lily	6 in.	12 in or more

Muscari — Hyacinth  
 Daffodils — Narcissi  
 Jonquil — Narcissi  
 Crocus — Iris

Wednesday, September 15, 1943

258th Day—107 days to follow

LIST OF SPRING FLOWERING BULBS  
(HARDY)

CLEAR
CLOUDY
RAIN
SNOW

Tulips  
 Narcissi  
 Hyacinth  
 Anemone (Buttercup family)  
 Chionodoxa (Glory-of-the Snow)  
 Crocus (Iris family)  
 Eranthis (Winter Aconite)  
 Erythronium (Adder's tongue) (Lily family)  
 Fritillaria (Crown Imperial)  
 Galanthus (Amaryllis family)  
 Leucojum (Spring snowflake)  
 Muscari (Grape hyacinth)  
 Ornithogalum (Star of Bethlehem) not indoor variety  
 Ranunculus (Bulbous buttercups)  
 Scilla (Lily family)

Thursday, September 16, 1943

259th Day—106 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## INSIGNIFICANCE

continued from page 245

Not only is an individual's size insignificant, but the influence which he exerts is also unimportant. For example, let us take the man whose accomplishments during his life time have influenced more people than any other person that ever lived—Jesus Christ Himself. In a very short life of only thirty-three years, he was able to exert an influence that has persisted down to this day—almost 2000 long years after his death. But to be entirely unprejudiced, we must remember that Christianity, as such, is practiced by less than one-third of the two billion inhabitants of the earth to-day. Relatively speaking his sphere of influence

→

Friday, September 17, 1943

260th Day—105 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Cont. from 236

is still not great. The influence which a man can exert, naturally enough, leads us to thoughts concerning the time element in which any man can exert his influence on others. The two thousand years is a comparatively short time in contrast to the length of time which man has lived on the earth. The life span of a human being is but a fraction of a moment in the infinity of time. Geologically speaking, time is not measured in years, but in ages; and an age is but a fleeting moment in eternity. And so it is—our personal problems and our petty troubles seem always to be the most

→

Saturday, September 18, 1943

261st Day—104 days to follow

CLEAR
CLOUDY
RAIN
SNOW

cont. from 237

important thing in the world. We forget that, individually, we are but a small part in a great plan; and consequently, time and again we arrive at exalted opinions concerning our own importance.

R. Janson

Sunday, September 19, 1943

262nd Day—103 days to follow

12. "Therefore all things whatsoever ye would that men should do to you, do ye even so to them."

Matt. Chapter 7

Monday, September 20, 1943

263rd Day—102 days to follow

TURN TO PAGE 246 before reading below.  
continued from pg. 251

CLEAR
CLOUDY
RAIN
SNOW

But to get back to the story—Jerry got under one shoulder and I got under the other. We had to carry him out. He was so drunk he couldn't even sit, let alone walk, and he didn't even recognize me.

We had a little trouble getting him out. He wanted to stop for "just one more drink." Eventually we reached the club house and he finally realized where he was. He thought that we were taking him to another saloon—or cafe, if you prefer.

The fun was just beginning. "Boys," he said, "We're

Tuesday, September 21, 1943

264th Day—101 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Buddies, aren't we?"

"Sure, Bill, we're Buddies."

I knew what he was driving at but I was curious <sup>as to</sup> where he kept it. It reminded me of some of my other 'buddies.' I wondered where lonely, old Oscar was — I remembered how he used to come to work every morning half pickled — and I wondered what happened to Sam — Sam the most good-for-nothing and most peculiar person I think I've ever met. I used to be his 'buddy,' too.

"Boys, I've got something to show you," he said, and careened over to his bed. He pulled down the sheet and produced the bottle.

Wednesday, September 22, 1943

265th Day—100 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Taking a gulp large enough to kill a whale, he passed it over.

I, too, took a mighty drag and passed it on to Jerry. Bill never noticed my thumb covering the mouth of the bottle. "Good stuff," I remarked.

"Damn good!" he exclaimed.

"What does the bottle say, Jerry? What does it say?"

"It says 'Kentucky Bourbon Whisky, blended.'"

"Oh, no, that ain't what I mean. Does it say 'one fourth, two fourths, or three fourths'?"

"Well I'll be damned," said Jerry. — "It says one

Thursday, September 23, 1943

266th Day—99 days to follow

CLEAR
CLOUDY
RAIN
SNOW

fourth." It didn't strike him as amusing.

A white sticker on the bottom of the bottle attracted my attention. "Let's see that bottle, Bill," He reluctantly passed it over. In neatly printed letters was inscribed the following: "Mr. Howard." It was my turn. "Well I'll be damned," I said. "Drunk on the boss's whisky."

or

Two days later Bill was sober enough to talk straight. He said he left the house with a check for ninety-

Friday, September 24, 1943

267th Day—98 days to follow

CLEAR
CLOUDY
RAIN
SNOW

nine dollars. He left twenty dollars at a friend's house in town (after cashing the check) and then started to hit the high spots. He remembers entering "Ray's" and starting to buy drinks for four men. And that's about all to remember. He has about seven or eight dollars left.

I told him I would be glad to help him try to recover the money or at least beat the        out of the bartender.

He declined both offers.... He has no one to spend it on, and he has no incentive to save.

Saturday, September 25, 1943

268th Day—97 days to follow

CLEAR
CLOUDY
RAIN
SNOW

The Club had its annual Fall Round-up today and what a time. I crawled into bed tonight about 3:30 tomorrow morning (?)!

Sunday, September 26, 1943

269th Day—96 days to follow

I Corinthians 3, 8

"and every man shall receive his own reward according to his own labour."

Monday, September 27, 1943

270th Day—95 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## INSIGNIFICANCE

It is a common fault of many people to arrive at distorted conclusions concerning their own importance, when in reality their relatively inconspicuous size, their own sphere of influence, and the time in which their influence can be exerted, is of no significance when compared to the vastness of the universe, the effects on the universe which can be produced by any man—even the greatest—and the time of life of a man as compared to the infinity of time. The earth itself is but a speck of dust in boundless space. A single man is inconceivably small. If a scale model of our entire solar system, including the sun and all the planets, were to be placed between the four corners of the Cleveland public square, the nearest star to Pluto, the farthest planet from the sun, would occupy a position somewhere near Steubenville, Ohio.

Cont. on page 236 ←

Tuesday, September 28, 1943

271st Day—94 days to follow

CLEAR
CLOUDY
RAIN
SNOW

"Wild Bill" Lovejoy rides again. Yip-eee. Yes-siree. "Wild Bill" is a full-fledged Brookside 'Champion' now. He has successfully met and passed his apprenticeship.

About 10:30 this evening I was down in the boiler room killing time with some some of the 'champs! Mr. Howard came down the stairs—a look of embarrassment was on his face—and walked over towards us. I was mildly surprised as he is usually very considerate and gives a fair warning (by a noisy approach) and plenty of time for those with no special business in the boiler

Wednesday, September 29, 1943

272nd Day—93 days to follow

CLEAR
CLOUDY
RAIN
SNOW

room to exit by the back door.

"Boys," he said, "I hate to ask you to do this, but it seems that Bill, our new dish-washer has gone out on a spree and is too far gone now to find his way back alone. We just got a call from "Ray's Cafe" and they suggest (that's putting it mildly) that several fellows from the Country Club get down there right away, before the cops get there, if Brookside wants a dishwasher."

"C'mon, Jerry," I said. "Let's get started. You can drive the station wagon and I'll take care of Bill."

some sort, one of his 'buddies' hit him on the side of the face and Bill staggered back, tottered on his already unstable legs, turned, and fell into a corner of a table. What happened after this is a matter for speculation. Whether it happened in the room where he found him or whether it happened somewhere else there was no way of telling. I looked carefully over every table in the room but I could find no traces of blood or any other sign inferring that the action took place here.

There was nothing else to do. I didn't know how much money Bill had

Friday, October 1, 1943

274th Day—91 days to follow

CLEAR
CLOUDY
RAIN
SNOW

stagette day at the Country Club tonight.

when he started <sup>no</sup> or how much he now had. The bartender volunteered the information that he was 'like that when he walked in.' I couldn't exactly call him a liar because I had no proof, but the look of scorn I flashed at him certainly let him know what I thought. I could tell by his reactions he knew what I was thinking. I shall always think that that ~~W@Z~~ had a cut of Bill's money himself; and the tale that Bill told me later, when he was sober enough talk (Two days later), only confirmed my suspicions the more.

cont. on page 239.



Saturday, October 2, 1943

275th Day—90 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Immediately following the Ravenna football game several of the fellows and I (All members of the leader's club) went to Nelson's Ledges. I found a swell camping place behind the ledges and plan to spend a couple of nights there in the near future. The best place, to my way of thinking is the "Devil's Den," if approached by an underground cavern!

Sunday, October 3, 1943

276th Day—89 days to follow

We went horseback riding at Brookside Riding Club tonight. I had a swell horse—if there was a good place to ride. His gallop was like the wind, and it really took work to get him to come to a stop.

Monday, October 4, 1943

277th Day—88 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## CONSERVATION

In natural resources and in natural beauty the U.S. is excelled by no single nation in the world. But it is an unfortunate fact that America is also the most wasteful nation in the world. It is the all-important task of scientific men of today to wake up the American people to the realization that our natural resources will not last indefinitely—that some of our reserves are dwindling at an alarming rate. Fifty-two per cent of the estimated original reserve of copper has already been exhausted;

Tuesday, October 5, 1943

278th Day—87 days to follow

CLEAR
CLOUDY
RAIN
SNOW

sixty-six per cent of the lead; fifty-eight per cent of the zinc; fifty-five per cent of the oil — and so it goes all down the line — twenty-eight per cent of the iron; eighty per cent of the gold.

The U. S. is, historically speaking, a very young nation. Almost overnight it has sky-rocketed to a position of leadership and influence among the powers of the world. What is the reason for this almost incredible surge in the influence of a relatively small country? The answer is quite obvious. It is

2.

Wednesday, October 6, 1943

279th Day—86 days to follow

CLEAR
CLOUDY
RAIN
SNOW

because of America's seemingly unlimited natural wealth. In the last century, when whole nations in Europe were starving, famine and pestilence ravaged the continent. America — the only world power to do so — stood forward with open arms as the land of promise, the land of "milk and honey," the country with 'streets paved of gold,' the nation where every man was his own master, the Utopia where everyone with a willing heart and a strong back

3.

Thursday, October 7, 1943

280th Day—85 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Autumn is here in all its glory. I've many times thought that this is the best season of the year. The trees with many colored leaves, the days just cool enough that you have to wear a sweater and keep active to stay warm, the nights clear and cold with bright stars shining overhead, the water in the brooks too cold to swim in but still possessing that tempting appeal, the winter birds returning from the north, the mosquitoes and other summer insect pests mostly gone — all these things go to make Autumn one of the nicest times of year and yet Fall is only a transition period between the cold season and the warm.....

Winter will soon be here!

Friday, October 8, 1943

281st Day—84 days to follow

CLEAR
CLOUDY
RAIN
SNOW

could have land, food, clothing, and shelter.

Yes, the answer is right before our eyes. When the forest lands of the East were exhausted, the Pioneers moved farther west. When the fur-bearing animals of the East were exterminated, the trappers pushed on to the Rockies. When the limited space for raising agricultural products was filled to overflowing, the farmers pushed on to the rolling plains of the Middle West.

Saturday, October 9, 1943

282nd Day—83 days to follow

CLEAR
CLOUDY
RAIN
SNOW

The Universal Struggle has a Pattern of Conflict. It is based primarily on the attempt of a few men to seize the power and control of a great many men. Thus in a dictatorship we have a government of the people, by a few, and for those few.

w. s.

Sunday, October 10, 1943

283rd Day—82 days to follow

"Tyranny, like hell, is not easily conquered."

Thomas Payne

Monday, October 11, 1943

284th Day—81 days to follow

CLEAR
CLOUDY
RAIN
SNOW

The reaction was inevitable. Of the one billion acres of primeval forest land at the time of the Pilgrims, only 150,000,000 acres of merchantable forest land remains. If this same rate of depletion continues our forests will last only 57 more years. Of the innumerable herds of buffalo that once roamed the Grand Prairie, only a scattered herd exists today in the national forests of the West. Of the millions of acres of fertile lands available years ago, 300,000,000

5.

Tuesday, October 12, 1943

285th Day—80 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Portugal grants Allies Azores bases  
 Oct 12-43  
 \* \* \*

acres (one sixth of the country) have been ravaged by improper selection of crops, the failure to practice strip-farming, and the wrong methods of erosion-control.

Deserted mining towns throughout the West are silent reminders of the mad scramble for natural wealth that took place in the latter part of the nineteenth century. As the old saying goes:

"Nothing comes out of a copper mine but copper and profanity." The resultant ghost towns are a mute testimony to the truth

6.

Wednesday, October 13, 1943

286th Day—79 days to follow

CLEAR
CLOUDY
RAIN
SNOW

of the adage. Localities made unfit for human habitation by the dumping of waste chemicals into streams, and other equally thoughtless practices of industry, large acres made unproductive as a result of overgrazing and consequent wind and water erosion, other vast areas laid waste by forest fires and ruthless lumbering practices for personal gain—all these shameful realities could have been prevented. If practical, scientific methods had been employed by industries and loggers alike,

7.

Thursday, October 14, 1943

287th Day—78 days to follow

CLEAR
CLOUDY
RAIN
SNOW

all this thoughtless destruction would have been prevented.

Naturally, this heedless exploitation of our natural resources has led to some benefits. The temporary rise in living standards has contributed greatly toward making the United States the powerful nation it is today. But the fact remains—America cannot hope to remain a rich nation for very long unless this tragic waste is stopped.

Therefore, the first problem of today's scientists is this: to educate the American people to the real

8.

Friday, October 15, 1943

288th Day—77 days to follow

CLEAR
CLOUDY
<input checked="" type="checkbox"/> RAIN
SNOW

1 went down town and bought some bulbs tonight for the club.

12	Grape hyacinth	@	\$.60
12	Scilla (mixed)	@	.75
12	Narcissi (mixed)	@	.70
3	Iris	@	.20

TOTAL \$2.25

1 want to plant them tomorrow if it doesn't rain.

Saturday, October 16, 1943

289th Day—76 days to follow

<input type="checkbox"/>	CLEAR
<input type="checkbox"/>	CLOUDY
<input checked="" type="checkbox"/>	RAIN
<input type="checkbox"/>	SNOW

I went swimming today. The water is like ice. It can't get much colder without freezing. I'll have to drain the pool one of these days. I can't take the chance that it might freeze and crack the sides of the pool.

Sunday, October 17, 1943

290th Day—75 days to follow

"A man of strong understanding is a man of strong character."

Monday, October 18, 1943

291st Day—74 days to follow

<input type="checkbox"/>	CLEAR
<input type="checkbox"/>	CLOUDY
<input type="checkbox"/>	RAIN
<input type="checkbox"/>	SNOW

facts concerning our resources, to develop the waste lands of today and by scientific rehabilitation to make them productive crop lands of tomorrow, to increase the yield and the quality of our agricultural products by scientific cross-breeding and cultivation—in short, to insure tomorrow's citizens the same advantages in natural wealth that we have enjoyed. Truly, this is an all-important task, for America's future wealth and future position in world politics depend upon how

Tuesday, October 19, 1943

292nd Day—73 days to follow

CLEAR
CLOUDY
RAIN
SNOW

efficiently America's scientists can meet our countries problems and how effectively these men can overcome them.

The answer to a good many of these problems lies in the research laboratories of the nation. It is here that synthetic rubber has been developed. It is here that a synthetic gas fuel will be created, a fuel far superior economically to bulky, heavy, wasteful coal. It is here that an efficient method to extract aluminum from its ore has been discovered. It is here that hitherto

10.

Wednesday, October 20, 1943

293rd Day—72 days to follow

CLEAR
CLOUDY
RAIN
SNOW

useless substances will be utilized by these same men of vision and made servants of man. It is here in these laboratories that our scientists can best utilize our remaining natural wealth. And it is here that they can determine the best methods and the best materials for replenishing the soil and replacing our exhausted resources.

Within these laboratories lies the material and the potential power our country needs. America is still the richest, most beautiful nation in the world. Let's keep it that way.

11.

R. Janson



Thursday, October 21, 1943

294th Day—71 days to follow

CLEAR
CLOUDY
RAIN
SNOW

X

## 5. Chemical agency of water

Underground waters and origin  
of springs. Artesian wells

Mineral springs

Limestone caves

Lime sinks

Chemical deposits in springs

Deposits of lime carbonates

Deposits of iron oxides

Deposits of sulphur

Deposits of silica

chem. deposits in lakes

Saline lakes - salt lakes

Alkaline lakes - chlorides  
carbonates in alkaline lakes

Borax lakes - Thibet, Cal., Nev.

The salt in the ocean  
is the accumulated leech-  
ings from the rocks down  
through the ages.

Friday, October 22, 1943

295th Day—70 days to follow

CLEAR
CLOUDY
RAIN
SNOW

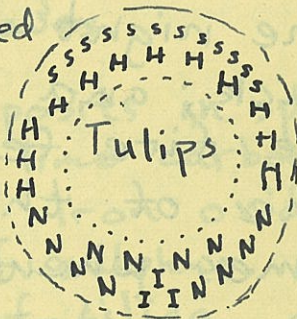
Twilight had already  
fallen when I picked up  
a lunch and headed for a  
rendezvous, around a camp-  
fire with two other fellows.  
The night was cold and  
black, and the warmth of  
the fire felt good. It was  
one of those occasional  
times when I was able  
to get alone with myself.  
It has put me in a thought-  
ful mood—pity the people  
around me for the next  
few days— or weeks.

Saturday, October 23, 1943

296th Day—69 days to follow

	CLEAR
	CLOUDY
X	RAIN
	SNOW

It was rather cold and damp at work today; the ground was spongy and a slight mist kept falling all afternoon. I planted the bulbs I bought about ten days ago and cleaned up several flower beds. I put the bulbs in the round flower bed on the "little island"



- S... Scilla  
 H... Grape hyacinth  
 I... Iris  
 N... Narcissi

Sunday, October 24, 1943

297th Day—68 days to follow

"If a man empties his purse into his head, no one can take it from him."

Benj. Franklin

Monday, October 25, 1943

298th Day—67 days to follow

	CLEAR
	CLOUDY
	RAIN
	SNOW

Annuals which I used last summer: (or perennials treated as annuals)

Ageratum  
 Geranium  
 Petunia  
 Periwinkle  
 Pom pom zinnia  
 Fantasy zinnia  
 Calendula  
 Nasturtium  
 Marigold  
 Snapdragon  
 Coleus  
 Morning glory  
 Aster  
 Snow on the Mountain  
 Allysum  
 Phlox drummondii  
 Bachelor's button

Tuesday, October 26, 1943

299th Day—66 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Perennials used at Brook-side:

Tiger lily  
 Shasta daisy  
 Rose  
 Lily of the valley  
 Black-eyed susan

Bulbs

Gladiola  
 Tulip

Sunday, October 24, 1943

297th Day—68 days to follow

Wednesday, October 27, 1943

300th Day—65 days to follow

CLEAR
CLOUDY
RAIN
SNOW

XI.

C. Organic agencies

(The most delicate indicators of physical conditions)

1. Vegetable accumulation
  - a. Formation of coal
  - b. Formation of lignite
2. Iron accumulations
  - a. To throw light on the great beds of iron ore found in early strata
3. Lime accumulations
  - a. To explain the formation of limestone
4. Geographical distribution of species
  - a. Geographical diversity of species in early epochs
  - b. Laws of succession of organic forms in the history of the earth—Evolution

(Results of slow processes.)

Tuesday, October 26, 1943

299th Day—66 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Perennials used at Brook-  
side:

Tiger lily  
Shasta daisy  
Rose  
Lily of the valley  
Black-eyed susan

Bulbs

Gladiola  
Tulip

Sunday, October 24, 1943

297th Day—68 days to follow

Wednesday, October 27, 1943

300th Day—65 days to follow

CLEAR
CLOUDY
RAIN
SNOW

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  - b. Laws of succession of  
organic forms in the his-  
tory of the earth—  
Evolution

(Results of slow processes.)

Thursday, October 28, 1943

301st Day—64 days to follow

CLEAR
CLOUDY
RAIN
SNOW

### I. Vegetable accumulations

a. Carbonaceous mud called peat or "tule-lands"

(I) Peat-bogs most common in cool, moist climates

\* Peat has a remarkable property of preventing or retarding decomposition.

The skeletons of animals are preserved in peat.

Peat subjected to great pressure for ages is converted to coal.

(I) Sometimes covered with river silt, alternating, on deltas, etc.

b. Drift timber

Rafts collected at the mouths of rivers.

(I) Become waterlogged

(II) Slowly change to brown, cheesy lignite or coal.

Friday, October 29, 1943

302nd Day—63 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Tonight after dark we had a camp-fire in the park. H. H. Timken was kind enough to furnish the logs—although he didn't know it. The Hi Y had a hay ride.

### 3. Lime accumulations

Mainly in the form of corals and shells.

(I) Coral reefs and islets

(II) Beautiful for their interest and beauty.

b. Coral islands a breccia of coral limestone.

Saturday, October 30, 1943

303rd Day—62 days to follow

CLEAR
CLOUDY
RAIN
SNOW

I hiked between five and six miles in less than an hour this afternoon. The weather was a little too damp for good hiking.

Sunday, October 31, 1943

304th Day—61 days to follow

"It wouldn't hurt so much to become angry, except that for some reason, anger makes your mouth work faster than your mind."

Special Data

2.

Iron accumulations

Iron found universally as  $\text{Fe}_2\text{O}_3$  and  $\text{FeCO}_3$ .

If there is an excess of organic matter then the iron deposits as  $\text{FeCO}_3$ .  
( $\text{Fe}_2\text{O}_3$  makes red or yellow deposits)

Examples:

Red soil right near roots is bleached. Surface soil in red clay regions is bleached.

Clay of uplands may be yellow or red, but clay of swamps is always bluish. (Because of organic peat)

3.

Lime accumulations

Mainly accumulations of corals and shells

a. Coral reefs and islands

(I) Largest continuous body of land by the agency of corals is on our own coast, viz. in Florida.

(II) Beautiful for popular interest

b. Coral islands a breccia of coral limestone.

## c. Types of reefs

- (I) Fringing reefs
- (II) Barrier reefs
- (III) Circular reefs of atolls
- (IV) Closed lagoons + lagoonless islands

## d. Darwin's subsidence theory

- (I) Every reef began as a fringe
- (II) Ocean floor has slowly subsided taking down all volcanic islands
- (III) Stages of formation due to sinking island
  - (A) Fringe
  - (B) Barrier
  - (C) Atoll or lagoon
  - (D) Lagoonless island

e. Area of the subsiding <sup>sea</sup> floor

Not less than 12,000,000 square miles or greater than N. Am. continent!

Area of lost land: estimated 100,000 sq. miles

## f. Geologic significance

- (I) When the sea floor settles it causes

305th Day—60 days to follow

CLEAR
CLOUDY
RAIN
SNOW

a rise in the land somewhere else, probably in the western half of the Am. continent both north and south, causing greater general erosion in the west and cutting the canyons deeper. (Extreme rise nearly 20,000 feet) This down sinking of the Mid-Pacific bottom of several thousand feet over many million square miles happened in later geologic times and is probably still progressing.

- (II) To determine the position of old coral seas and reefs:

## b. Shells

## a. Molluscos

- (I) To trace previous shore lines

## b. Microscopic

- (I) Some animal, some vegetable; some deep-sea, some fresh water.

Tuesday, November 2, 1943

306th Day—59 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## c. Fresh water deposits

(I) Microscopic "diatoms" form shells of silica

(A) Found abundantly in California

## d. Deep-sea deposits

(I) Deep-sea ooze a fine white mud composed mainly of shells

(A) The chalk of England, France, interior of Europe

(B) Our own western plains

4. Geographical distribution of the species.

Wednesday, November 3, 1943

307th Day—58 days to follow

CLEAR
CLOUDY
RAIN
SNOW

IMPORTANT DATES  
WORLD WAR II

1940  
Nov. 23, Bulgaria joins the Axis  
Oct. 28, Italy invades Greece  
Nov. 3, Dueser Navy destroyed by British  
June 10, Italy declares war on Britain and France  
June 16, Russian military occupation of Latvia and Estonia  
Mar. 13, Finland and Russia make peace  
June 15, Russia secures rights over Lithuania



Tuesday, November 2, 1943

306th Day—59 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## c. Fresh water deposits

(I) Microscopic "diatoms" form shells of silica

(A) Found abundantly in California

## d. Deep-sea deposits

(I) Deep-sea ooze a fine white mud composed mainly of shells

(A) The chalk of England, France, interior of Europe

(B) Our own western plains

4.
----

 Geographical distribution of the species.

Wednesday, November 3, 1943

307th Day—58 days to follow

CLEAR
CLOUDY
RAIN
SNOW

IMPORTANT DATES  
WORLD WAR II

1940

Nov. 23; Bulgaria joins the Axis

Oct 28; Italy invades Greece

Nov. 13; Dueses Navy destroyed by British

June 10; Italy declares war on Britain and France

June 16; Russian military occupation of Latvia and Estonia

Mar 13; Finland and Russia make peace

June 15; Russia secures rights over Lithuania

Thursday, November 4, 1943

308th Day—57 days to follow

<input type="checkbox"/>	CLEAR
<input type="checkbox"/>	CLOUDY
<input type="checkbox"/>	RAIN
<input type="checkbox"/>	SNOW

- c. Fresh water deposits  
 (I) Microscopic "diatoms" form shells of silica  
 (A) Found abundantly in California
- d. Deep-sea deposits  
 (I) Deep-sea ooze a fine white mud composed of shells  
 (A) The chalk of England, France, interior of Europe  
 (B) Our own western plains

4 Geographical distribution of the species.

Friday, November 5, 1943

309th Day—56 days to follow

<input type="checkbox"/>	CLEAR
<input type="checkbox"/>	CLOUDY
<input type="checkbox"/>	RAIN
<input type="checkbox"/>	SNOW

### IMPORTANT DATES WORLD WAR II

1940

- Nov. 23; Bulgaria joins the Axis  
 Oct 28; Italy invades Greece  
 Nov. 13; Duces Navy destroyed by British  
 June 10; Italy declares war on Britain and France  
 June 16; Russian military occupation of Latvia and Estonia  
 Mar 13; Finland and Russia make peace  
 June 15; Russia secures rights over Lithuania

31th Day—54 days to follow

"Progress always involves risks"  
 "You can't steal second base"  
 "and keep one foot on first"

Saturday, November 6, 1943

310th Day—55 days to follow

CLEAR
CLOUDY
RAIN
SNOW

### IMPORTANT DATES IN WORLD WAR II 1938

March 12; Austria seized by Nazis

Sunday, November 7, 1943

311th Day—54 days to follow

"Progress always involves risks.  
You can't steal second base  
and keep one foot on first."

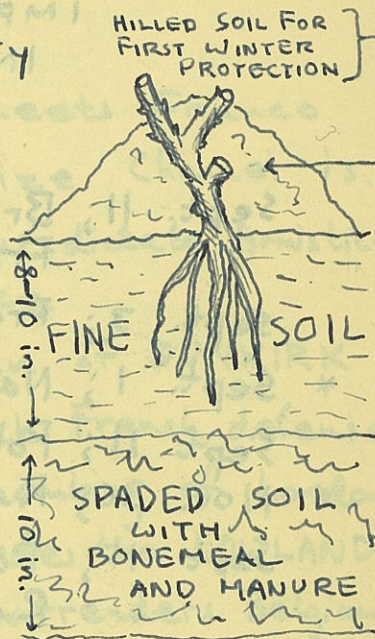
Monday, November 8, 1943

312th Day—53 days to follow

CLEAR
CLOUDY
RAIN
SNOW

I planted roses today.

Although it isn't absolutely necessary to plant roses this way it gives the very best results. The layer of fine soil should be removed while the bottom layer is spaded and fertilized.



ROSES

Tuesday, November 9, 1943

313th Day—52 days to follow

CLEAR
CLOUDY
RAIN
SNOW

### IMPORTANT DATES IN WORLD WAR II

1939

- Sept. 11; British troops land in France
- Sept. 3; France declares war on Nazis
- \* Sept. 1; Nazi invasion of Poland
- Sept 11; Poland <sup>(west)</sup> conquered by Nazis
- \* Nov. 30; Russia invades Finland
- Sept 11; Poland (east) seized by Russia
- March 23; Nazis seize Memel E. Prussia

Wednesday, November 10, 1943

314th Day—51 days to follow

CLEAR
CLOUDY
RAIN
SNOW

### IMPORTANT DATES IN WORLD WAR II

1940

- Oct 23; Hitler meets Franco
- July 1; Nazis seize Channel Is.
- June 22; Fran Nazis dictate Armistice in France
- \* June 3; Evacuation of DUNKIRK
- May 19; Nazis break French defense
- Sept 8; All-out bombing of London
- \* May 10; Nazis invades the LOWLANDS
- May 28; Leopold surrenders Belgium
- Aug 8; Beginning of mass air-raids of England by Germany
- April 15; British and French land in Norway
- Nov. 20; Hungary joins the Axis
- Aug. 30; Part of Rumania ceded to Hungary
- Sept 6; King Carol of Rumania abdicates
- Aug. 21; Part of Rumania ceded to Bulgaria

Thursday, November 11, 1943

315th Day—50 days to follow

CLEAR
CLOUDY
RAIN
<input checked="" type="checkbox"/> SNOW

## ARMISTICE DAY

Lehman had a football game to-day. I hurt my foot doing a back flip. This morning there was about three inches of snow but by game time it had all melted. The field was too muddy and slippery for good tumbling.

Friday, November 12, 1943

316th Day—49 days to follow

CLEAR
CLOUDY
RAIN
SNOW

THE LAST PARAGRAPH  
of Darwin's epoch-making  
work on the theory of  
ORIGIN OF SPECIES.

"It is interesting to contemplate a tangled bank, clothed with many plants of many kinds, with birds singing on the bushes, with various insects flitting about, and with worms crawling through the damp earth, and to reflect that these elaborately constructed forms, so different from each other, and dependent upon each other in so complex a manner, have all been produced by laws acting around its.

Saturday, November 13, 1943

317th Day—48 days to follow

CLEAR
CLOUDY
RAIN
SNOW

These laws, taken in the largest sense, being Growth with Reproduction;

Sunday, November 14, 1943

318th Day—47 days to follow

"Prove all things; hold fast that which is good."

I Thess. ch. 5, v. 21

"To be unmasked is a humiliation; but to unmask one's self is a triumph."

Victor Hugo  
from Toilers of the Sea

Monday, November 15, 1943

319th Day—46 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Inheritance which is almost implied by reproduction;

→  
to Natural Selection,  
entailing Divergence of character and the Extinction of less improved forms.

Tuesday, November 16, 1943

320th Day—45 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Variability from the indirect and direct action of the conditions of life, and from use and disuse:

→

Sunday, November 14, 1943

318th Day—47 days to follow

"Prove all things; hold fast that which is good."

I Thess. ch. 5, v. 21

"To be unmarked is a humiliation; but to unmask one's self is a triumph."

Victor Hugo  
from Tailors of the Sea

Wednesday, November 17, 1943

321st Day—44 days to follow

CLEAR
CLOUDY
RAIN
SNOW

a Ratio of Increase so high as to lead to a Struggle for Life, and as a consequence to Natural Selection, entailing Divergence of Character and the Extinct of less improved forms.

→

Thursday, November 18, 1943

322nd Day—43 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Thus, from the war of nature, from famine and death, the most exalted object which we are capable of conceiving, namely, the production of the higher animals, directly follows. There is grandeur in this view of life, with its several powers, having been originally breathed by the Creator into a few forms or into one; and that, whilst this planet has gone cycling on according to the fixed law of gravity, from so simple a beginning endless forms most beautiful and most wonderful have been, and are being evolved."

Friday, November 19, 1943

323rd Day—42 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## DEVELOPING THE QUADRATIC FORMULAE

$$ax^2 + bx + c = 0$$

$$x^2 + \frac{b}{a}x + \frac{c}{a} = 0$$

$$x^2 + \frac{b}{a}x = -\frac{c}{a}$$

$$x^2 + \frac{b}{a}x + \frac{b^2}{4a^2} = \frac{b^2}{4a^2} - \frac{c}{a}$$

$$x + \frac{b}{2a} = \pm \sqrt{\frac{b^2}{4a^2} - \frac{c}{a}}$$

$$x + \frac{b}{2a} = \pm \sqrt{\frac{b^2 - 4ac}{4a^2}}$$

$$x = \frac{-b}{2a} \pm \frac{\sqrt{b^2 - 4ac}}{2a}$$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

Sunday, November 21, 1943  
325th Day—40 days to follow  
cont. on pg. 296



Saturday, November 20, 1943

324th Day—41 days to follow

CLEAR
CLOUDY
RAIN
SNOW

GRAPHING LINEAR FUNCTIONS;  $f(x)$ 

Form of all liner equations: An equation with any number of unknowns none of which are above the first power.

A linear function of  $x$  has the form  $(ax+b)$  or  $f(x) = ax+b$ ; Set  $y =$  to the function

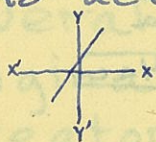
$$Y = ax + b$$

To graph  $\frac{3}{5}X - 3$ ;  $f(x) = \frac{3}{5}X - 3$

$$Y = \frac{3}{5}X - 3$$

X =	-5	-2	0	6
Y =	-6	-4 $\frac{1}{5}$	-3	$\frac{3}{5}$

Only two points are needed to determine the straight line.



Cont. on pg. 300

Sunday, November 21, 1943

325th Day—40 days to follow

"Prejudice is a great time saver. It enables one to form opinions without bothering to get the facts."

Monday, November 22, 1943

326th Day—39 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## CAMPING BREAKFASTS

I

Flap jacks  
Cereal  
Oranges

Pancake batter  
Milk  
Syrup  
Oranges

II

Bacon  
Eggs  
Coffee  
Oranges or fruit

Bacon  
Eggs  
Coffee  
Oranges

III

French toast  
Scrambled eggs  
Prunes

Bread  
Milk  
Eggs  
Butter  
Syrup  
Prunes

Tuesday, November 23, 1943

327th Day—38 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## CAMPING DINNERS

I

Hunter's stew  
Biscuit or twist  
Rice and raisins  
Boiled potatoes  
Fresh vegetables

II

Camper's goulash  
Baked potatoes  
Baked apples  
Tea  
Fresh vegetables

III

Roasted corn  
Baked eggs  
Baked potatoes  
Apple sauce  
Coffee

Wednesday, November 24, 1943

328th Day—37 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## CAMPING SUPPERS

I

Macaroni & cheese  
Bread & butter  
Peas  
Prunes

II

Vegetable soup  
Stewed beef  
Crackers  
Milk  
Heavenly rice

III

Spanish rice  
Fresh carrots, onions, celery  
Apple sauce  
Milk  
Cornmeal bread

329th Day—36 days to follow

CLEAR
CLOUDY
RAIN
SNOW

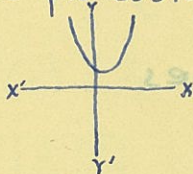
GRAPHING FUNCTIONS OF X DEFINED BY A FORMULA

graph  $(x^2 - 4x + 6)$ ;  $f(x) = x^2 - 4x + 6$

$Y = x^2 - 4x + 6$

X =	-1	1	2	3	5
Y =	11	3	2	3	11

it follows the form of a parabola



The letter in parenthesis is the independent variable; the letter to the left stands for the function.

$f(x)$ ;  $H(x)$ ;  $K(s)$

GRAPHING LINEAR EQUATIONS

Form:  $ax + by = c$  OF TWO UNKNOWN

Ex.  $3x + 2y = 6$

$f(6-2y) = 3x$

$f(\frac{6-2y}{3}) = x$

$3x = 6 - 2y$

$x = \frac{6-2y}{3}$

$2y = 6 - 3x$   
 $y = \frac{6-3x}{2}$

Y =	0	1½	-6	3	
X =	2	0	6	0	



330th Day—35 days to follow

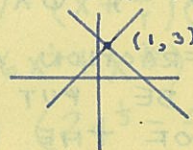
CLEAR
CLOUDY
RAIN
SNOW

SLOPE OF A LINE

The direction of any line is determined by the ratio of the number of units vertically to the number horizontally

SOLUTION OF LINEAR EQUATIONS IN SYSTEMS (SIMULTANEOUS EQUATIONS)

I. By graph



II. By substitution

1.  $4x + 5y = 6$

2.  $2x + 3y = 4$

$x = \frac{4-3y}{2}$

substitute in 1.

III. By adding or subtracting one from the other elimination one unknown

IV. By determinants

$3x + 4y = -7$

$8x - 6y = 13$

$x = \frac{\begin{vmatrix} 4 & -7 \\ -6 & 13 \end{vmatrix}}{\begin{vmatrix} 3 & 4 \\ 8 & -6 \end{vmatrix}}$

$y = \frac{\begin{vmatrix} 3 & -7 \\ 8 & 13 \end{vmatrix}}{\begin{vmatrix} 3 & 4 \\ 8 & -6 \end{vmatrix}}$

Saturday, November 27, 1943

331st Day—34 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## EXPONENTS &amp; RADICALS

$$\sqrt[4]{\frac{81}{16x^8}} = \frac{\sqrt[4]{81}}{\sqrt[4]{16x^8}} = \frac{3}{2x^2}$$

$$a^{\frac{1}{2}} \cdot a^{\frac{1}{2}} = a^{(\frac{1}{2} + \frac{1}{2})} = a^1 = a; \quad a^{\frac{5}{2}} a^{\frac{5}{2}} = a^5$$

$$(a^{\frac{5}{2}})^2 = a^5; \quad a^{\frac{2}{3}} = \sqrt[3]{a^2}; \quad a^{\frac{1}{2}} = \sqrt{a}$$

$$64^{\frac{5}{6}} = \sqrt[6]{64^5}; \quad a^0 = 1; \quad Y^0 = 1; \quad (8x^3yz)^0 = 1;$$

$$X^{-2} Y = \frac{Y}{X^2}; \quad 6X^{-2} = \frac{6}{X^2}; \quad X^{-4} Y^{-5} = \frac{1}{X^4 Y^5};$$

IN A FRACTION ANY FACTOR IN THE NUM.  
MAY BE PUT IN THE DENOM. IF THE  
SIGN OF THE EXPONENT IS CHANGED.

$$\frac{a}{bx^n} = \frac{ax^{-n}}{b}; \quad 2ab^{-3} = \frac{2a}{b^3}$$

$$(6c)^{\frac{1}{5}} = \sqrt[5]{6c}; \quad (4c^3)^{\frac{2}{3}} = \sqrt[3]{(4c^3)^2}; \quad \sqrt[5]{(c-3d)^3} = (c-3d)^{\frac{3}{5}}$$

Sunday, November 28, 1943

332nd Day—33 days to follow

"The most practical men  
are dreamers."

What is it that makes  
men great in the eyes  
of other men?

Monday, November 29, 1943

333rd Day—32 days to follow  
EXAMPLES OF EXPONENTS

CLEAR
CLOUDY
RAIN
SNOW

$$(3x^{-1}y^3)^2 = 3x^{-2}y^6 = \frac{3y^6}{x^2}$$

$$(125x^6)^{\frac{2}{3}} = \sqrt[3]{(125x^6)^2} = (5x^2)^2 = 25x^4$$

$$(4a^{-3}-b)^{-1} = \frac{1}{4a^{-3}-b} = \frac{a^3}{4-b}$$

$$(x^{-1}-y^{-1})(x^{-1}+y^{-1}) = X^{-2} - Y^{-2} = \frac{1}{x^2-y^2}$$

$$\left(\frac{.125x^9}{8z^{3k}}\right)^{\frac{2}{3}} = \sqrt[3]{\left(\frac{.125x^9}{8z^{3k}}\right)^2} = \left(\frac{.5x^3}{2z^k}\right)^2 = \frac{.25x^6}{4z^{2k}}$$

$$(x^2-y^{-2}) = (x+y^{-1})(x-y^{-1}) = \left(x+\frac{1}{y}\right)\left(x-\frac{1}{y}\right)$$

$$(216-x^{\frac{3}{2}}) = (6-x^{\frac{1}{2}})(36+6x^{\frac{1}{2}}+x^{\frac{2}{2}})$$

$$(4a^{\frac{2}{3}}-20a^{\frac{1}{3}}b^{\frac{1}{3}}+25b^{\frac{2}{3}}) = (2a^{\frac{1}{3}}-5b^{\frac{1}{3}})^2$$

$$\frac{x^{-4}-y^{-4}}{x^{-2}+y^{-2}} = \frac{1}{x^4-y^4} \cdot \frac{x^2+y^2}{1} = \frac{x^2+y^2}{(x^2+y^2)(x+y)(x-y)} = \frac{1}{x^2-y^2}$$

$$\frac{a^{2h}-b^{2h}}{a^h-b^h} = \frac{(a^h-b^h)(a^{2h}+a^hb^h+b^{2h})}{(a^h-b^h)}$$

Tuesday, November 30, 1943

334th Day—31 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## RADICALS

$$\sqrt{18} = \sqrt{9 \cdot 3} = 3\sqrt{3}$$

$$\sqrt{5 + \frac{10y}{x^2} + \frac{5y^2}{x^4}} = \sqrt{\frac{5x^4 + 10x^2y + 5y^2}{x^4}} = \frac{\sqrt{5x^4 + 10x^2y + 5y^2}}{x^2} = \frac{\sqrt{5(x^2 + y)^2}}{x^2} = \frac{\sqrt{5}(x^2 + y)}{x^2}$$

$$\sqrt[3]{\frac{a-3}{8} \cdot \frac{3}{y^3}} = \frac{\sqrt[3]{3ay^3 - 24}}{2y}$$

$$\frac{\sqrt{5(x^4 + 2x^2y + y^2)}}{x^2} = \frac{\sqrt{5}(x^2 + y)}{x^2}$$

Sunday, November 28, 1943

332nd Day—33 days to follow

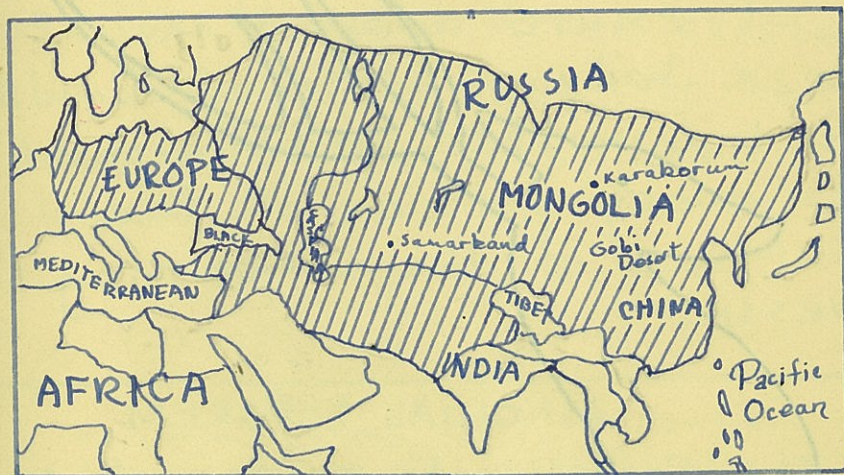
"The most practical men  
are dreamers."

What is it that makes  
men great in the eyes  
of other men?

Special Data

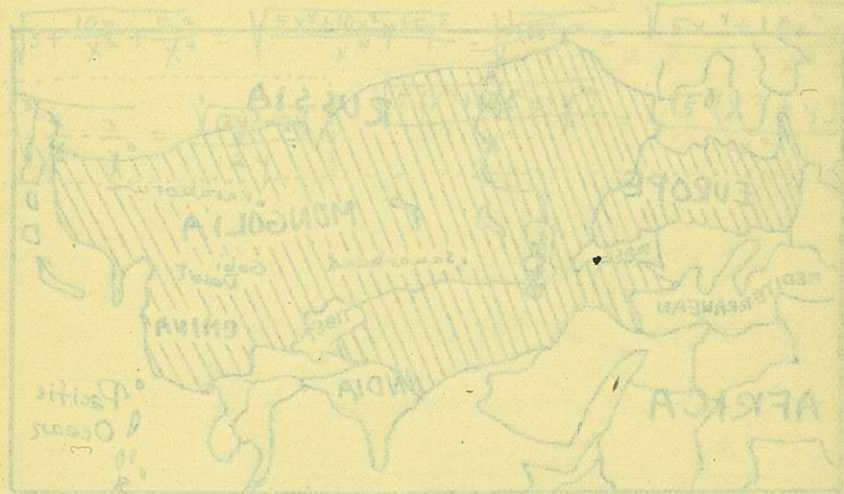
335th Day—30 days to follow

## THE CONQUESTS OF GENGHIS KHAN



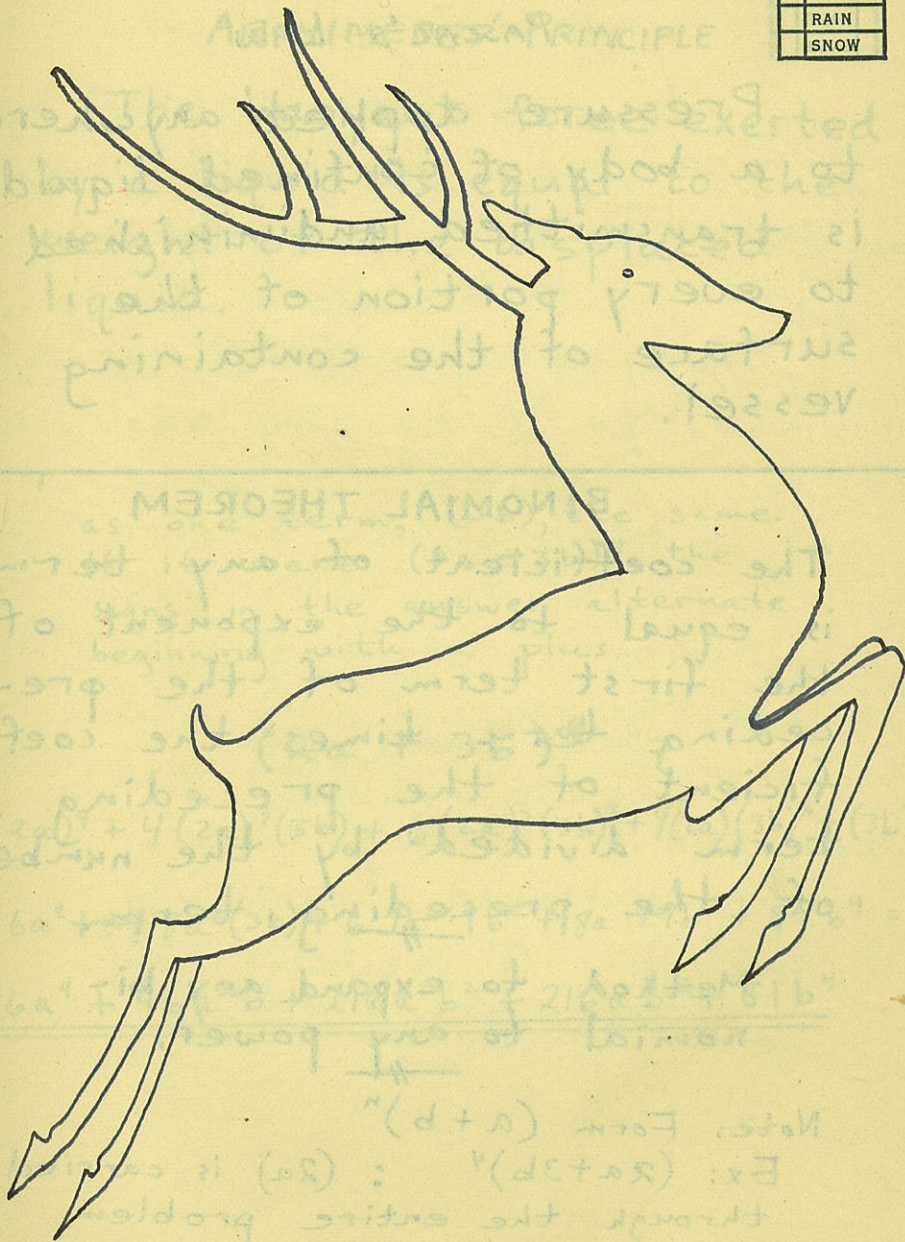
334th Day—31 days to follow

CLEAR
CLOUDY
RAIN
SNOW



335th Day—30 days to follow

CLEAR
CLOUDY
RAIN
SNOW



Thursday, December 2, 1943

336th Day—29 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## PASCAL'S LAW

Pressure applied anywhere to a body of confined liquid is transmitted undiminished to every portion of the surface of the containing vessel.

## BINOMIAL THEOREM

The coefficient of any term is equal to the exponent of the first term of the preceding term times the coefficient of the preceding term divided by the number of the preceding term.

Method to expand any binomial to any power.

Note: Form  $(a+b)^n$

Ex:  $(2a+3b)^4$  :  $(2a)$  is carried through the entire problem

Friday, December 3, 1943

337th Day—28 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## ARCHIMEDES' PRINCIPLE

The buoyant force exerted by a liquid is equal to the weight of the displaced liquid.

as one term;  $(3b)$ , the same. If it were  $(2a+3b)^4$  the signs in the answer alternate beginning with a plus.

$$(2a + 3b)^4 =$$

$$(2a)^4 + 4(2a)^3(3b) + 6(2a)^2(3b)^2 + 4(2a)(3b)^3 + (3b)^4 =$$

$$16a^4 + 4 \cdot 8a^3(3b) + 6 \cdot 4a^2 \cdot 9b^2 + 8a \cdot 27b^3 + 81b^4 =$$

$$\underline{\underline{16a^4 + 96a^3b + 216a^2b^2 + 216ab^3 + 81b^4}}$$

Saturday, December 4, 1943

338th Day—27 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## BOYLE'S LAW

The pressure exerted by a given mass of gas at constant temperature is inversely proportional to its volume or directly proportional to its density.

Sunday, December 5, 1943

339th Day—26 days to follow

"An optimist laughs to forget. A pessimist forgets to laugh."

Note: Form  $(a+b)^n$

Ex:  $(2a+3b)^4$

through the entire problem

Monday, December 6, 1943

340th Day—25 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## LAWS OF THE PENDULUM

1. The periods of pendulums of the same length swinging through short arcs are independent of the mass and the material of the bobs.
2. The period of a pendulum swinging through a short arc is independent of the amplitude of the arc.
3. The periods of pendulums are directly proportional to the square roots of their length.
4. The frequencies of the pendulums are inversely proportional to the square roots of their lengths.

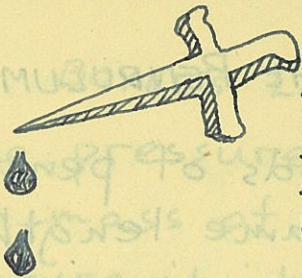
the distance traveled during the first second.



Tuesday, December 7, 1943

341st Day—24 days to follow

CLEAR
CLOUDY
RAIN
SNOW



Two years ago today the Japanese treacherously attacked American forces at Pearl Harbor.

### NEWTON'S LAW OF UNIVERSAL GRAVITATION

Any two bodies in the universe attract each other with a force which is directly proportional to the product of their masses and inversely proportional to the square of the distance between them.

Wednesday, December 8, 1943

342nd Day—23 days to follow

CLEAR
CLOUDY
RAIN
SNOW

### GALILEO'S LAWS OF FALLING BODIES

In a vacuum falling bodies descend at the same rate, regardless of their mass or size.

1. The whole distance traveled by a falling body in any number of seconds is equal to the distance traveled during the first second times the square of the number of seconds.
2. The gain in velocity of a falling body each second is the same.
3. The amount of this gain is numerically equal to twice the distance traveled during the first second.

Thursday, December 9, 1943

343rd Day—22 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## BERNOULLI'S PRINCIPLE

In fluid motion wherever the velocity of flow is high the pressure is low.

Friday, December 10, 1943

344th Day—21 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## NEWTON'S LAWS OF MOTION

## First Law

Every body continues in its state of rest or of uniform motion in a straight line unless compelled by external force to change that state.

[This tendency to resist any change is called inertia.]

The inertia of rotating bodies, by virtue of which they tend to fly off at a tangent to the circle of rotation if the restraining force is released, is called centrifugal force.]

Saturday, December 11, 1943

345th Day—20 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## Second Law

Rate of change of momentum is proportional to the force acting, and the change takes place in the direction in which the force acts.

Sunday, December 12, 1943

346th Day—19 days to follow

2. "Every way of a man is right in his own eyes; but the Lord pondereth the hearts."

Prov. Chapter 21, v. 2.

Solomon was pretty smart...

Monday, December 13, 1943

347th Day—18 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## Third Law

To every action there is an equal and opposite reaction.

Tuesday, December 14, 1943

348th Day—17 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## HOOKE'S LAW

Within the limits of perfect elasticity deformations are directly proportional to the forces producing them.

OR

Stress is proportional to strain within the limits of perfect elasticity.

Sunday, December 12, 1943

346th Day—19 days to follow

2. "Every way of a man is right in his own eyes; but the Lord pondereth the hearts."

Prov. Chapter 21, v. 2.

Solomon was pretty smart

Wednesday, December 15, 1943

349th Day—16 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## LAWS OF CAPILLARY ACTION

1. Liquids rise in capillary tubes when they are capable of wetting them, but are depressed in tubes which they do not wet.
2. The elevation in the one case and the depression in the other are inversely proportional to the diameters of the tubes.

Thursday, December 16, 1943

350th Day—15 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## LAWS OF THE LEVER

Simple lever

The moment of the effort equals the moment of the resistance.

General law of the lever

1. The sum of all the moments tending to turn the lever in one direction about an axis is equal to the sum of all the moments tending to turn it in the opposite direction;

2. the sum of all the forces acting in one direction on the lever is equal to the sum of all the forces acting in the opposite direction.

Friday, December 17, 1943

351st Day—14 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## NEWTON'S PRINCIPLE OF WORK

In all mechanical devices of whatever sort, if friction may be neglected, the work expended upon the machine is equal to the work accomplished by it.

Saturday, December 18, 1943

352nd Day—13 days to follow

CLEAR
CLOUDY
RAIN
SNOW

SUNDAY, DEC. 19, 1943

I hiked all day. The weather was fairly cold with snow covering the hillsides. The purpose was to take a Christmas Bird Census and send the results to the Audobon Club where they will be tabulated and compared with similar lists from all over Ohio.

Sunday, December 19, 1943 Robert's birthday.  
353rd Day—12 days to follow He is 24.

9. "Who can say, I have made my heart clean, I am pure from my sin?"

Proverbs Chap. 20

I covered Ink Park and Aplink's Orchard.

Monday, December 20, 1943

354th Day—11 days to follow

CLEAR
CLOUDY
RAIN
SNOW

SUNDAY, DEC. 19, 1943

It was too windy for a good field day. The birds were sticking low and under cover.

crows	7
pheasants	2
nut-hatches (white-breasted)	16
tree sparrows	75
downy woodpecker	4
chickadee (black-capped)	2
tufted titmice	20
English sparrows	75
juncos (slate-colored)	2
cardinals	6
song sparrows	4
blue jays	2
starlings	6
red tailed hawk	1

14 species

TOTAL 222

Tuesday, December 21, 1943

355th Day—10 days to follow

CLEAR
CLOUDY
RAIN
SNOW

I have been taking care of Boyd's animals for him while he is in Michigan. Last week I slept at his house and got up about 5:30 to get all the work done before school time. This week I will have more time.

Wednesday, December 22, 1943

356th Day—9 days to follow

CLEAR
CLOUDY
RAIN
SNOW

I finally found Marye-Ann's gift. I had to look high and low but finally found a very good one. It is certainly a mild Christmas season.

Thursday, December 23, 1943

357th Day—8 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Up early this morning to feed the chickens, cats, dog, hogs, and cow; to water all the liver stock, and to milk the cow. Oops, I forgot about feeding the rabbit. Ruth Ann wouldn't like that to happen to her "bunny."

In the evening the chores are much the same, but I also gather the eggs, and bed down the cow.

Friday, December 24, 1943

358th Day—7 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Christmas Eve.....

The stars are very bright tonight. The air is clear and crisp. I took Marye-Ann's gift over about midnight and put it under their beautiful Christmas tree.

This year is different from the others. Christmas Eve—and I am alone, working late in my journal, but I can't say that I mind the solitude.



Saturday, December 25, 1943

359th Day—6 days to follow

CLEAR
CLOUDY
RAIN
SNOW

"Now when Jesus was born in Bethlahem of Judea in the days of Herod the king, behold, there came wise men from the east to Jerusalem,

2. Saying, Where is he that is born King of the Jews? for we have seen his star in the east, and are come to worship him."

St. Matthew, 2:1+2.

It has been the happiest Christmas of my life.... I saw a robin this morning on my way in from work.

Sunday, December 26, 1943

360th Day—5 days to follow

I watched a hawk a while this afternoon and listened to a screech owl after nightfall. A thick fog is hovering over most of the golf course.

Monday, December 27, 1943

361st Day—4 days to follow

CLEAR
CLOUDY
RAIN
SNOW

December 27, 1939, four years ago today our tribe was founded.

Laugh if you will — but it has helped to make every fellow that ever belonged to it more self reliant and efficient, and stronger both mentally and physically. Of course they had to have something on the ball or they never would have been elected in the first place.

Probably three times the number of members have been turned down by the council ring.

Tuesday, December 28, 1943

362nd Day—3 days to follow

CLEAR
CLOUDY
RAIN
SNOW

## LINING A FOREST AREA

Trees are the oldest living things on earth! Since the dawn of civilization man has used the tree in his gradual rise to power, — as a shelter from wild beasts, as a tool to cultivate his food plants, as a weapon of war, as ships to conquer the oceans, in the numerous and varied articles of wood which are now in use. Always he has been faced by the same problems: how best to get the tree from its location in the forest to a place where it can be turned into a useful product.

The first step in the the modern process of logging is called "lining." It consists principally in, etc.

Wednesday, December 29, 1943

363rd Day—2 days to follow

CLEAR
CLOUDY
RAIN
SNOW

Scaling  
~~Lining~~ a Forest Area

The first step in the process of modern lumbering is a small but very important task, <sup>and</sup> <sup>one</sup> lacking the ~~usual~~ glamour usually attributed to the logging camp.

The <sup>which lumberjacks refer to as "scaling,"</sup> job is most often performed by a man who is familiar with the logging industry and who has spent much time in the "Big Timber." In general, it is the <sup>"scaler's"</sup> ~~timber~~ duty to check ~~the timber~~ <sup>to determine</sup> ~~estimate~~ the <sup>in a certain vicinity</sup> number and kind of trees, <sup>to</sup> estimate the number of board feet in the area, and <sup>to</sup> make a <sup>rough</sup> topographical map of the vicinity.

The first duty after setting up camp is to scout the area to be lined — often a mile square.

Thursday, December 30, 1943

364th Day—1 day to follow

CLEAR
CLOUDY
RAIN
SNOW

to become familiar with the typography and general characteristics of the land. He must know the direction of fire trails, animal trails, the location of springs, streams, hills, gorges, ravines, and other parts of the natural surroundings. This is not just an incidental requirement, <sup>on the contrary</sup> but it is a very important ~~first~~ <sup>step</sup> because it is by these <sup>features of the landscape</sup> ~~signs~~ <sup>scaler</sup> that the ~~line~~ divides his square mile into smaller units so that the trees can be accurately and swiftly counted, neither leaving <sup>out</sup> any ~~out~~ nor counting some ~~trees~~ twice.

After this is done he walks to the center of his first section, which is about 70-100 feet on either side of him, and standing in the same

Friday, December 31, 1943

365th Day—last day

CLEAR
CLOUDY
RAIN
SNOW

spot he gradually turns in a complete circle counting every tree up to the edge of the section in this manner. On his belt is fastened a tool with several keys, each key labeled with the name of a common lumber tree of the vicinity—such as "chestnut, maple, jack pine, blue spruce, mountain pine, etc." When he presses a key it moves a tape numbered from one to about 50. Thus, when he completes his circle he not only has the total number of trees in the section, by adding the sum of the totals on the tapes, but also a tabulation by specie.

The next step is to find an average tree of each specie. ~~From~~ <sup>in</sup> this representative tree the

scaler  
 liner judges the board feet in it by referring to a table, which shows <sup>the number of</sup> board feet ~~the amount for~~ in a tree of such a diameter and such a height. By multiplying the board feet in this average chestnut, for example, by the number of chestnuts in the section, he knows the approximate number of board feet of chestnut in the section. Thus, by the same method he determines the board feet in every section and then the total for the area.

The last job is that of making a map showing the general characteristics of the land and the contour in particular. By now he is <sup>quite</sup> pretty familiar with the territory and the map-making job is more easily accomplished than under ordinary circumstances. By putting the facts <sup>observed</sup> learned in the

T

first hike together with those details learned by moving from section to section he really needs to do little more, because only a rough draft of the area is necessary for the "Boss Lumberman's" purpose. He wants the map so that he can have a general idea of the terrain when he moves into the area with his sawmill, <sup>then</sup> so that he can lay his R.R. track to the best advantage and lay out any roads or buildings in the most nearly ideal location.

His job, having been completed, the ~~liner~~ <sup>scaler</sup> returns to the lumber camp and makes his report to the foreman. Experienced liners have sometimes estimated the board feet in an area to within one per cent! The End



# Anno Domini 1944

January							February							March						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
..	..	..	..	..	..	1	..	..	1	2	3	4	5	..	..	..	1	2	3	4
2	3	4	5	6	7	8	6	7	8	9	10	11	12	5	6	7	8	9	10	11
9	10	11	12	13	14	15	13	14	15	16	17	18	19	12	13	14	15	16	17	18
16	17	18	19	20	21	22	20	21	22	23	24	25	26	19	20	21	22	23	24	25
23	24	25	26	27	28	29	27	28	29	..	..	..	..	26	27	28	29	30	31	..
30	31	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
April							May							June						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
..	..	..	..	..	..	1	..	1	2	3	4	5	6	..	..	..	..	1	2	3
2	3	4	5	6	7	8	7	8	9	10	11	12	13	4	5	6	7	8	9	10
9	10	11	12	13	14	15	14	15	16	17	18	19	20	11	12	13	14	15	16	17
16	17	18	19	20	21	22	21	22	23	24	25	26	27	18	19	20	21	22	23	24
23	24	25	26	27	28	29	28	29	30	31	..	..	..	25	26	27	28	29	30	..
30	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
July							August							September						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
..	..	..	..	..	..	1	..	..	1	2	3	4	5	..	..	..	..	..	1	2
2	3	4	5	6	7	8	6	7	8	9	10	11	12	3	4	5	6	7	8	9
9	10	11	12	13	14	15	13	14	15	16	17	18	19	10	11	12	13	14	15	16
16	17	18	19	20	21	22	20	21	22	23	24	25	26	17	18	19	20	21	22	23
23	24	25	26	27	28	29	27	28	29	30	31	..	..	24	25	26	27	28	29	30
30	31	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
October							November							December						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7	..	..	..	1	2	3	4	..	..	..	..	..	1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23
29	30	31	..	..	..	..	26	27	28	29	30	..	..	24	25	26	27	28	29	30
..	..	..	..	..	..	..	..	..	..	..	..	..	..	31	..	..	..	..	..	..