148th Year

THE OLD FARMER'S 1940 ALMANAC

BY

ROBERT B. THOMAS

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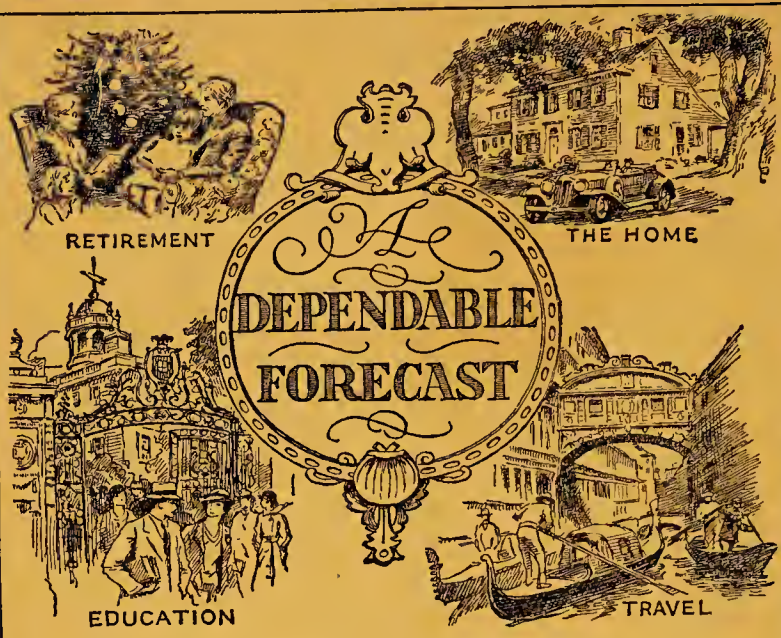

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197 Clarendon Street, Boston, Mass.

Number One Hundred and Forty-Eight

THE

(OLD)

FARMER'S ALMANACK,

CALCULATED ON A NEW AND IMPROVED PLAN
FOR THE YEAR OF OUR LORD

1940

Being BISSEXTILE or LEAP YEAR, and (until July 4)
164th of American Independence.

FITTED FOR BOSTON, BUT WILL ANSWER FOR ALL NEW ENGLAND STATES

Containing, besides the large number of Astronomical Calculations and the Farmer's Calendar for every month in the year, a variety of

NEW, USEFUL, AND ENTERTAINING MATTER.

ESTABLISHED IN 1793

BY ROBERT B. THOMAS.

"The earth deprived of Winter's use,
Sweet smiling Spring would then refuse
To put forth buds and kindly showers,
Nor Summer dress the fields with flowers."

From the Title Page, The Old Farmer's Almanac, 1840.

Sold by Booksellers and Traders throughout New England and Atlantic States.

A FARM

A farm is more than hives of bees
Or cows all feeding towards the breeze,
A farm is more than fields of stubble
And helping small lambs over trouble,
Weaning calves upon your fingers,
Mending carts while Winter lingers.

A farm is a mysterious place
Where you can come out face to face
With yourself at lonely labor,
A farm is making a good neighbor
Out of rain or wind or snow
And guiding life along the flow
Of the soil beside a plow,
Saving Summer in a mow.
A farm is where boys grow to men
When they are barefoot still and ten,
And men stay boys enough to see
Brothers in butterflies and the tree.

A farm is something like a wife,
Labor that adds up to life,
A farm is something you can trust
To build you children out of dust.

Robert P. Tristram Coffin

The Old Farmer did not predict the Hurricane. He cannot predict the unforeseen in nature nor does he wish to do so, for he believes humanity is happier if it does not dwell too much upon either the past or the future but secures the best out of life as it comes to all of us. And so it is also with those events under the control of humanity. He did not predict the war nor can he predict what one man or one nation may do, for people change, conditions change and we are living in an age of the greatest change the world has seen. If, however, he believes that it is darkest before dawn, if he continues to have faith and a certain confidence that the will of the masses ultimately prevails, then he is certain that from these unsettled conditions we will ultimately come out with fair weather and live in a land of fine prospects and that success will come to those who are willing to work for it.

The farmers and others who read our Almanac know how infinitely better off we are than the peoples of other nations, even when they are at peace. The Old Farmer believes that our Government will use every means to keep us out of war and that it is through with its well intentioned experiments and is now seriously intent upon constructive and co-operative action for the benefit of commerce, agriculture, business and, above all, of peace. He believes that it is only through a betterment of conditions to all that the farmer may reap his full harvest. Nature heals its own wounds and through a period arrives at a normal average. The human world is bound to follow this admirable rule even after the greatest of catastrophes.

The Old Farmer

1940

JANUARY.

S	M	T	W	Th	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	Th	F	S
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11	12	13	14	15	16	17
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25	26	27	28	29	-	-
-	-	-	-	-	-	-

MARCH.

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10	11	12	13	14	15	16
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24	25	26	27	28	29	30
31	-	-	-	-	-	-

APRIL.

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-	-	-	-	-	-	-

MAY.

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12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	-
-	-	-	-	-	-	-

JUNE.

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JULY.

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28	29	30	31	-	-	-
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AUGUST.

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SEPTEMBER.

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OCTOBER.

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13	14	15	16	17	18	19
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27	28	29	30	31	-	-
-	-	-	-	-	-	-

NOVEMBER.

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DECEMBER.

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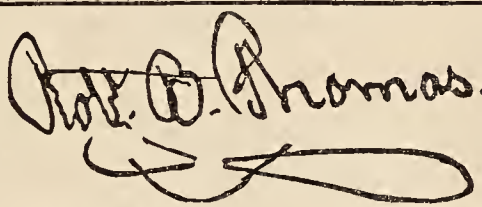
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	-	-	-	-
-	-	-	-	-	-	-

"It is by our works and not by our words we would be judged: these we hope will sustain us in the humble though proud station we have so long held. . . .



1941

JANUARY.

S	M	T	W	Th	F	S
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12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	-
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FEBRUARY.

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23	24	25	26	27	28	-
-	-	-	-	-	-	-

MARCH.

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16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	-	-	-	-	-

APRIL.

S	M	T	W	Th	F	S
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13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	-	-	-
-	-	-	-	-	-	-

MAY.

S	M	T	W	Th	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	Th	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	Th	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	Th	F	S
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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	-	-	-	-	-	-

SEPTEMBER.

S	M	T	W	Th	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	-	-	-	-
-	-	-	-	-	-	-

OCTOBER.

S	M	T	W	Th	F	S
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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	Th	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	Th	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	-	-	-
-	-	-	-	-	-	-

EXPLANATIONS FOR CALENDAR PAGES.

The **Calculations** are made for the latitude and longitude of Boston and are in *Eastern Standard Time*, i. e., the time of the 75th meridian West from Greenwich, which is 16 minutes behind Boston mean time; and for general purposes are sufficiently accurate for all parts of New England. If, however, greater accuracy is desired, regard may be had to the following precepts.

The Table given below contains corrections in minutes of time for a number of important places in New England, and any other place in New England can use the correction of the place in the Table which is nearest in longitude to itself.

For the Rising and Setting of the Sun, Moon and Planets add tabular quantity if longitude from Boston is West, but subtract it if East; and this will give the value when the place is in or near the same latitude as Boston. When the latitude of the place differs considerably from that of Boston, the correction will also be right when the celestial body is on or near the Equator; but when it is remote from the Equator so much accuracy cannot be expected.

For Sun Fast, subtract tabular quantity if longitude from Boston is West, but add it if East.

For Moon Souths, add tabular quantity if longitude from Boston is West, but subtract it if East.

	East.		*West.*		*West*
Eastport, Me.	16 min.	Concord, N.H.	2 min.	Springfield, Mass.	6 min.
Bangor, Me.	9 "	Nashua, N.H.	2 "	Williamstown, Mass.	9 "
Augusta, Me.	5 "	Plymouth, N.H.	3 "	Newport, R.I.	1 "
Lewiston, Me.	4 "	Keene, N.H.	5 "	Providence, R.I.	1 "
Portland, Me.	3 "	Montpelier, Vt.	6 "	Woonsocket, R.I.	2 "
Biddeford, Me.	2 "	Brattleboro, Vt.	6 "	New London, Conn.	4 "
Portsmouth, N.H.	1 "	Rutland, Vt.	8 "	Willimantic, Conn.	5 "
Provincetown, Mass.	4 "	Burlington, Vt.	9 "	Hartford, Conn.	6 "
Gloucester, Mass.	2 "	Lowell, Mass.	1 "	New Haven, Conn.	7 "
Plymouth, Mass.	2 "	Worcester, Mass.	3 "	Bridgeport, Conn.	9 "

If during any part of the year 1940 there is in operation in any State or City of New England any of the so-called "*daylight saving*" laws or ordinances, proper allowance for that should be made in applying the figures of time given in the Almanac, which figures, as above stated, are all herein given in *Eastern Standard Time.*

The **Times and Heights of the Tides at High Water** are for the Port of Boston (Navy Yard). The times of High Water are given on the left hand Calendar pages under "Full Sea." The heights of High Water in feet and tenths are given among other data on the right hand Calendar pages under "Aspects," &c. The heights are reckoned from Mean Low Water; each day has a set of figures—many of them preceded by the word "Tides." The upper figures give the height of the morning (A.M.) tide, and the lower that of the evening (P.M.) tide. (See pages 36 and 37 for N. Y. Tides.)

Names and Characters of the Principal Planets.

☉ ☼ ☺ ☀ The Sun.
● ☽ ☾ ☾ The Moon.
☿ Mercury.
♀ Venus.
⊕ The Earth.
♂ Mars.
♃ Jupiter.
♄ Saturn.
♅ or ♁ Uranus.
♆ Neptune.
♇ Pluto.

Names and Characters of the Aspects.

☌ Conjunction, or in the same degree.
□ Quadrature, 90 degrees.
☍ Opposition, or 180 degrees.
☊ Dragon's Head, or Ascending Node.
☋ Dragon's Tail, or Descending Node.

Names and Characters of the Signs of the Zodiac.

1. ♈ Aries, head.
2. ♉ Taurus, neck.
3. ♊ Gemini, arms.
4. ♋ Cancer, breast.
5. ♌ Leo, heart.
6. ♍ Virgo, belly.
7. ♎ Libra, reins.
8. ♏ Scorpio, secrets.
9. ♐ Sagittarius, thighs.
10. ♑ Capricornus, knees.
11. ♒ Aquarius, legs.
12. ♓ Pisces, feet.

Chronological Cycles for 1940.

Golden Number	3	Solar Cycle	17
Epact	21	Dominical Letters	GF
Roman Indiction	8		
Year of Julian Period	6653		

Movable Feasts and Fasts for 1940.

Septuagesima Sun.,	Jan. 21	Good Friday,	March 22	Whit Sunday,	May 12
Shrove Sunday,	Feb. 4	Easter Sunday,	" 24	Trinity Sunday,	" 19
Ash Wednesday,	" 7	Low Sunday,	" 31	Corpus Christi,	" 23
1st Sunday in Lent,	" 11	Rogation Sunday,	April 28	1st Sunday in Advent,	Dec. 1
Palm Sunday,	March 17	Ascension Day,	May 2		

VENUS, MARS, JUPITER AND SATURN, 1940.

Below are given the times of the rising or setting of the Planets named, on the first, eleventh and twenty-first days of each month. The time of the rising or setting of any one of said Planets between the days named may be found with sufficient accuracy by interpolation.

1940		VENUS		MARS		JUPITER		SATURN	
		h. m.		h. m.		h. m.		h. m.	
JANUARY	1st	sets	6 40 P.M.	sets	10 58 P.M.	sets	11 9 P.M.	sets	1 9 A.M.
"	11th	"	7 5 P.M.	"	10 54 P.M.	"	10 37 P.M.	"	0 30 A.M.
"	21st	"	7 28 P.M.	"	10 49 P.M.	"	10 5 P.M.	"	11 49 P.M.
FEBRUARY	1st	sets	7 57 P.M.	sets	10 45 P.M.	sets	9 32 P.M.	sets	11 9 P.M.
"	11th	"	8 20 P.M.	"	10 41 P.M.	"	9 3 P.M.	"	10 33 P.M.
"	21st	"	8 43 P.M.	"	10 37 P.M.	"	8 34 P.M.	"	9 58 P.M.
MARCH	1st	sets	9 3 P.M.	sets	10 34 P.M.	sets	8 9 P.M.	sets	9 27 P.M.
"	11th	"	9 25 P.M.	"	10 30 P.M.	"	7 41 P.M.	"	8 54 P.M.
"	21st	"	9 47 P.M.	"	10 25 P.M.	"	7 14 P.M.	"	8 20 P.M.
APRIL	1st	sets	10 9 P.M.	sets	10 20 P.M.	sets	6 44 P.M.	sets	7 44 P.M.
"	11th	"	10 29 P.M.	"	10 15 P.M.	"	6 17 P.M.	"	7 11 P.M.
"	21st	"	10 39 P.M.	"	10 8 P.M.	rises	4 44 A.M.	"	6 38 P.M.
MAY	1st	sets	10 44 P.M.	sets	10 1 P.M.	rises	4 11 A.M.	rises	4 38 A.M.
"	11th	"	10 39 P.M.	"	9 52 P.M.	"	3 37 A.M.	"	4 2 A.M.
"	21st	"	10 22 P.M.	"	9 41 P.M.	"	3 3 A.M.	"	3 26 A.M.
JUNE	1st	sets	9 46 P.M.	sets	9 27 P.M.	rises	2 26 A.M.	rises	2 46 A.M.
"	11th	"	8 55 P.M.	"	9 12 P.M.	"	1 52 A.M.	"	2 9 A.M.
"	21st	"	7 47 P.M.	"	8 56 P.M.	"	1 18 A.M.	"	1 33 A.M.
JULY	1st	rises	3 58 A.M.	rises	8 39 P.M.	rises	0 43 A.M.	rises	0 56 A.M.
"	11th	"	3 6 A.M.	"	8 19 P.M.	"	0 8 A.M.	"	0 19 A.M.
"	21st	"	2 25 A.M.	"	7 58 P.M.	"	11 29 P.M.	"	11 38 P.M.
AUGUST	1st	rises	1 54 A.M.	rises	7 34 P.M.	rises	10 50 P.M.	rises	10 56 P.M.
"	11th	"	1 36 A.M.	"	7 11 P.M.	"	10 14 P.M.	"	10 19 P.M.
"	21st	"	1 27 A.M.	sets	6 47 P.M.	"	9 36 P.M.	"	9 40 P.M.
SEPTEMBER	1st	rises	1 25 A.M.	rises	5 5 A.M.	rises	8 53 P.M.	rises	8 57 P.M.
"	11th	"	1 31 A.M.	"	4 59 A.M.	"	8 14 P.M.	"	8 17 P.M.
"	21st	"	1 41 A.M.	"	4 52 A.M.	"	7 34 P.M.	"	7 36 P.M.
OCTOBER	1st	rises	1 56 A.M.	rises	4 46 A.M.	rises	6 52 P.M.	rises	6 56 P.M.
"	11th	"	2 13 A.M.	"	4 39 A.M.	"	6 10 P.M.	"	6 15 P.M.
"	21st	"	2 32 A.M.	"	4 33 A.M.	"	5 28 P.M.	"	5 34 P.M.
NOVEMBER	1st	rises	2 54 A.M.	rises	4 27 A.M.	rises	4 41 P.M.	rises	4 49 P.M.
"	11th	"	3 16 A.M.	"	4 21 A.M.	sets	5 46 A.M.	sets	5 49 A.M.
"	21st	"	3 38 A.M.	"	4 15 A.M.	"	5 0 A.M.	"	5 5 A.M.
DECEMBER	1st	rises	4 2 A.M.	rises	4 10 A.M.	sets	4 15 A.M.	sets	4 23 A.M.
"	11th	"	4 26 A.M.	"	4 5 A.M.	"	3 32 A.M.	"	3 41 A.M.
"	21st	"	4 50 A.M.	"	4 0 A.M.	"	2 50 A.M.	"	2 59 A.M.
"	31st	rises	5 13 A.M.	rises	3 55 A.M.	sets	2 10 A.M.	sets	2 19 A.M.

TIDE CORRECTIONS.

To obtain the time and height of high water at any place, apply the differences in accordance with the sign given to the daily predictions for Boston (Commonwealth Piers). Where a value in the "height difference" column is preceded by a *, the height at Boston should be multiplied by this ratio.

	Time Difference h. m.	*Height Difference* Feet
Augusta, Me.	+3 55	*0.4
Bangor, Me	−0 05	+3.7
Bar Harbor, Me.	−0 25	+1.1
Bath, Me.	+1 00	−3.0
Belfast, Me.	−0 15	+0.3
Block I. Harbor, R. I.	−3 45	*0.3
Boothbay Harbor, Me.	−0 20	−0.6
Bridgeport, Conn.	+0 10	−2.6
Bristol, R. I.	−3 40	*0.4
Camden, Me.	−0 20	+0.2
Chatham Light, Mass.	+0 25	−2.7
Cohasset, Mass.	−0 05	−0.4
Eastport, Me.	−0 20	+8.8
Edgartown, Mass.	+0 30	*0.2
Fall River, Mass.	−3 35	*0.5
Gloucester, Mass.	−0 05	−0.7
Greenport, L. I.	−0 50	*0.3
Hartford, Conn.	+4 10	*0.1
Hyannisport, Mass.	+0 45	*0.4
Nantucket, Mass.	+0 55	*0.3
Narragansett Pier, R. I.	−3 50	*0.4
New Bedford, Mass.	−3 35	*0.4
Newburyport, Mass.	+0 40	−1.6
New Haven, Conn.	+0 05	−3.1
New London, Conn.	−1 40	*0.3
Newport, R. I.	−3 50	*0.4
New York, Governors I.	−2 55	*0.5
Plymouth, Mass.	0 00	+0.2
Point Judith, R. I.	−3 40	*0.3
Portland, Me.	−0 10	−0.5
Port Clyde, Me.	−0 25	−0.1
Portsmouth, N. H.	+0 10	−1.6
Providence, R. I.	−3 30	*0.5
Provincetown, Mass.	0 00	−0.2
Rockland, Me.	−0 25	+0.3
Salem, Mass.	−0 05	−0.4
Sandwich, Mass.	+0 05	0.0
Stamford, Conn.	+0 10	−2.1
Stonington, Conn.	−2 10	*0.3
Vineyard Haven, Mass.	+0 10	*0.2
West Falmouth, Mass.	−3 25	*0.4
Woods Hole, Fish Com. Whf.	−2 30	*0.2

1940] JANUARY, First Month.

ASTRONOMICAL CALCULATIONS.

☉'s Declination.	Days.	d. m.	Days.	d. m.	Days.	d. m.	Days.	d. m.	Days.	d. m.
	1	23s. 03	7	22 27	13	21 35	19	20 28	25	19 07
	2	22 58	8	22 20	14	21 25	20	20 16	26	18 52
	3	22 53	9	22 12	15	21 14	21	20 03	27	18 37
	4	22 47	10	22 03	16	21 03	22	19 50	28	18 22
	5	22 41	11	21 54	17	20 52	23	19 36	29	18 06
	6	22 34	12	21 45	18	20 40	24	19 22	30	17 50

☾ Last Quarter, 1st day, 11h. 56m., evening, E.
● New Moon, 9th day, 8h. 53m., morning, E.
☽ First Quarter, 17th day, 1h. 21m., evening, E.
○ Full Moon, 24th day, 6h. 22m., evening, E.
☾ Last Quarter, 31st day, 9h. 47m., morning, W.

Day of Year.	Day of Month.	Day of the Week.	☉ Rises. h. m.	☉ Sets. h. m.	Length of Days. h. m.	Day's Incr. h. m.	Sun Past. m.	Moon's Age.	Full Sea, Boston. Morn h.	Full Sea, Boston. Even h.	☽'s Place	☽ Rises. h. m.	☽ Souths. h. m.
1	1	M.	7 14	4 22	9 8	0 4	12	22	3½	4	Lib	11 59	4 59
2	2	Tu.	7 14	4 23	9 9	0 5	12	23	4½	5	Lib	morn	5 51
3	3	W.	7 14	4 23	9 9	0 5	12	24	5½	6	Sco	1 07	6 42
4	4	Th.	7 14	4 24	9 10	0 6	11	25	6½	7	Sco	2 14	7 34
5	5	Fr.	7 14	4 25	9 11	0 7	11	26	7½	8	Sco	3 18	8 27
6	6	Sa.	7 14	4 26	9 12	0 8	10	27	8½	9	Sgr	4 20	9 19
7	7	S.	7 14	4 27	9 13	0 9	10	28	9¼	9¾	Sgr	5 16	10 12
8	8	M.	7 13	4 28	9 15	0 11	9	29	10	10¾	Cap	6 06	11 04
9	9	Tu.	7 13	4 29	9 16	0 12	9	●	10¾	11½	Cap	sets	11 54
10	10	W.	7 13	4 30	9 17	0 13	8	1	11½	–	Aqr	5 59	0 43
11	11	Th.	7 13	4 31	9 18	0 14	8	2	0	0¼	Aqr	6 57	1 29
12	12	Fr.	7 12	4 32	9 20	0 16	8	3	0¾	1	Aqr	7 55	2 13
13	13	Sa.	7 12	4 34	9 22	0 18	7	4	1½	1¾	Psc	8 52	2 56
14	14	S.	7 12	4 35	9 23	0 19	7	5	2¼	2¼	Psc	9 49	3 38
15	15	M.	7 11	4 36	9 25	0 21	6	6	2¾	3	Ari	10 46	4 20
16	16	Tu.	7 11	4 37	9 26	0 22	6	7	3½	4	Ari	11 44	5 03
17	17	W.	7 11	4 38	9 27	0 23	6	8	4¼	4¾	Ari	morn	5 47
18	18	Th.	7 10	4 39	9 29	0 25	5	9	5¼	5½	Tau	0 42	6 33
19	19	Fr.	7 10	4 41	9 31	0 27	5	10	6	6½	Tau	1 42	7 22
20	20	Sa.	7 9	4 42	9 33	0 29	5	11	7	7½	G'm	2 42	8 15
21	21	S.	7 8	4 43	9 35	0 31	5	12	7¾	8¼	G'm	3 42	9 10
22	22	M.	7 7	4 44	9 37	0 33	4	13	8¾	9¼	Cnc	4 40	10 08
23	23	Tu.	7 7	4 46	9 39	0 35	4	14	9½	10	Cnc	5 33	11 06
24	24	W.	7 6	4 47	9 41	0 37	4	○	10¼	10¾	Leo	rises	morn
25	25	Th.	7 5	4 48	9 43	0 39	3	16	11¼	11¾	Leo	6 07	0 05
26	26	Fr.	7 4	4 49	9 45	0 41	3	17	0	–	Vir	7 21	1 02
27	27	Sa.	7 4	4 51	9 47	0 43	3	18	0½	0¾	Vir	8 35	1 58
28	28	S.	7 3	4 52	9 49	0 45	3	19	1¼	1¾	Lib	9 47	2 53
29	29	M.	7 2	4 53	9 51	0 47	3	20	2¼	2¾	Lib	10 57	3 46
30	30	Tu.	7 1	4 54	9 53	0 49	2	21	3¼	3½	Lib	morn	4 39
31	31	W.	7 0	4 56	9 56	0 52	2	22	4	4½	Sco	0 06	5 31

JANUARY hath 31 days. [1940

On New Year's Day he plans a cruise
To Heaven straight — no time to lose!
Vowing to live so virtuously
That each besetting sin shall flee —
Good resolutions wide he strews
On New Year's Day.

CHARLOTTE PERKINS GILMAN
"On New Year's Day"

D. M.	D. W.	Aspects, Holidays, Heights of High Water, etc.	Farmer's Calendar.
1	M.	Circumcision. ☌ ♆ ☾. {10.1 9.9 Clear	We have always heard that there is a place for everything, but is anything ever in its place on a farm, or in a garage, or even in the living-room of one's home?
2	Tu.	⊕ in Perihelion. ☿ in ♑. {9.9 9.4 and cold	
3	W.	Lord Roberts welcomed in London after the Boer War, 1901 {9.9 9.0	
4	Th.	Shortest morning (Boston) Tides {9.9 8.8	We keep thinking that we will get around to fixing up such-and-such or repairing so-and-so or cleaning up this-and-that, but do we?
5	Fr.	Rhode Island first settled, 1636 Tides {10.0 8.7	
6	Sa.	Epiphany. Tides {10.1 8.7 Deep snow	
7	☾	1st S. a. Ep. ☌ ☍ ♃. ☾ runs low {10.1 8.8	THE OLD FARMER makes his plea this year to everyone to start right. Let the first week in January be devoted to setting things in order—taking account of stock—repairing what can be made useful and discarding that which is worn out or obsolete.
8	M.	☌ ☿ ☾. Tides {10.2 8.8	
9	Tu.	Safety lamp, invented by Humphrey Davy, first used in coal mines, 1816 {10.2 8.9	
10	W.	League of Nations organized, 1920 Tides {10.1 —	
11	Th.	Francis Scott Key, author of Star Spangled Banner, born, 1844 {8.9 9.9	
12	Fr.	☌ ♀ ☾. Tides {8.8 9.5 Moderating	When this has been accomplished then proceed to clean, polish and perfect. Make a list of what is needed for the coming months—plan for the future.
13	Sa.	☿ in Aphe. {8.8 9.8 General thaw	
14	☾	2d S. af. Epi. ☾ in Apo. ☾ on Eq. {8.7 9.0	
15	M.	☌ ♃ ☾. □ ♄ ☉. Tides {8.6 8.6	
16	Tu.	☌ ☍ ☾. Tides {8.5 8.3	
17	W.	☌ ♄ ☾. ☍ in ♋. Tides {8.5 8.0	
18	Th.	Loss of Stmshp. "City of Columbus" off Gay Head, 99 drowned, 1884 {8.5 7.9	In the evenings time can be found for straightening out accounts and making ready for tax returns, for while these distressing documents need not be filed until March, the sooner the reckoning is known the better.
19	Fr.	☌ ♁ ☾. Tides {8.7 7.8	
20	Sa.	King Kala Kaua of Hawaii died, 1891 Tides {9.0 8.0	
21	☾	Septuagesima S. Tides {9.4 8.3 Cold	We are all accustomed to wish our family and friends a happy New Year. THE OLD FARMER believes that having a house in order brings tranquillity to its owner and the satisfaction of things accomplished is a happy augury for the future. So start the New Year not only with good wishes but with good deeds.
22	M.	☾ runs high. Tides {9.9 8.8 wave	
23	Tu.	♃ in Perihelion. Tides {10.4 9.3	
24	W.	Alaska Boundary Treaty signed by U.S. and Great Britain, 1903 {10.9 9.8	
25	Th.	Conversion of St. Paul. Tides {11.3 10.3	
26	Fr.	♁ Stat. in R.A. ☾ in Peri. {11.4 — Below zero	
27	Sa.	Ambassador Bryce & Sec. Root signed Newfoundland fisheries treaty, 1909 {10.6 11.3	
28	☾	Sexag. Su. ☌ ☍ ☾. ☾ on Eq. {10.7 11.0	
29	M.	George III of England died, 1820 Tides {10.6 10.5 Snow,	
30	Tu.	Execution of Charles I at Whitehall, 1646 Tides {10.4 9.9 brisk	
31	W.	☌ ☿ ☉. Sup. {10.2 9.2 northerly winds	

THE OLD FARMER

ASTRONOMICAL CALCULATIONS.

☉'s Declination.	Days.	d. m.	Days.	d. m.	Days.	d. m.	Days.	d. m.	Days.	d. m.
	1	17s. 17	7	15 30	13	13 34	19	11 30	25	9 20
	2	17 00	8	15 11	14	13 14	20	11 09	26	8 57
	3	16 43	9	14 53	15	12 54	21	10 47	27	8 35
	4	16 25	10	14 34	16	12 33	22	10 26	28	8 12
	5	16 07	11	14 14	17	12 12	23	10 04	29	7 50
	6	15 49	12	13 54	18	11 51	24	9 42		

● New Moon, 8th day, 2h. 45 m., morning, E.
☽ First Quarter, 16th day, 7h. 55m., morning, E.
○ Full Moon, 23rd day, 4h. 55m., morning, W.
☾ Last Quarter, 29th day, 9h. 35m., evening, E.

Day of Year.	Day of Month.	Day of the Week.	☉ Rises. h. m.	☉ Sets. h. m.	Length of Days. h. m.	Day's Incr. h. m.	Sun Fast. m.	Moon's Age.	Full Sea, Boston. Morn h.	Full Sea, Boston. Even h.	☽'s Place	☽ Rises. h. m.	☽ Souths. h. m.
32	1	Th.	6 59	4 57	9 58	0 54	2	23	5	5½	Sco	1 12	6 24
33	2	Fr.	6 58	4 58	10 0	0 56	2	24	6	6¾	Sgr	2 14	7 16
34	3	Sa.	6 57	5 0	10 3	0 59	2	25	7	7¾	Sgr	3 11	8 09
35	4	S.	6 56	5 1	10 5	1 1	2	26	8	8¾	Cap	4 03	9 00
36	5	M.	6 55	5 2	10 7	1 3	2	27	9	9½	Cap	4 49	9 50
37	6	Tu.	6 54	5 4	10 10	1 6	2	28	9¾	10¼	Cap	5 31	10 38
38	7	W.	6 53	5 6	10 13	1 9	2	29	10½	11	Aqr	6 07	11 25
39	8	Th.	6 51	5 7	10 16	1 12	1	●	11¼	11¾	Aqr	sets	0 10
40	9	Fr.	6 50	5 8	10 18	1 14	1	1	0	–	Psc	6 43	0 53
41	10	Sa.	6 49	5 9	10 20	1 16	1	2	0¼	0½	Psc	7 40	1 35
42	11	S.	6 48	5 10	10 22	1 18	1	3	1	1¼	Psc	8 37	2 17
43	12	M.	6 46	5 11	10 25	1 21	1	4	1½	1¾	Ari	9 34	3 00
44	13	Tu.	6 45	5 13	10 28	1 24	1	5	2¼	2½	Ari	10 32	3 43
45	14	W.	6 44	5 14	10 30	1 26	1	6	3	3¼	Tau	11 30	4 28
46	15	Th.	6 42	5 15	10 33	1 29	1	7	3¾	4	Tau	morn	5 14
47	16	Fr.	6 41	5 17	10 36	1 32	2	8	4½	5	Tau	0 28	6 04
48	17	Sa.	6 40	5 18	10 38	1 34	2	9	5¼	6	G'm	1 26	6 56
49	18	S.	6 38	5 19	10 41	1 37	2	10	6¼	6¾	G'm	2 23	7 51
50	19	M.	6 37	5 20	10 43	1 39	2	11	7¼	7¾	Cnc	3 18	8 47
51	20	Tu.	6 35	5 21	10 46	1 42	2	12	8¼	8¾	Cnc	4 09	9 45
52	21	W.	6 34	5 23	10 49	1 45	2	13	9	9½	Leo	4 55	10 43
53	22	Th.	6 32	5 24	10 52	1 48	2	14	10	10½	Leo	5 38	11 40
54	23	Fr.	6 31	5 26	10 55	1 51	2	○	10¾	11¼	Vir	rises	morn
55	24	Sa.	6 29	5 27	10 58	1 54	2	16	11¾	–	Vir	7 24	0 37
56	25	S.	6 28	5 28	11 0	1 56	2	17	0¼	0½	Lib	8 38	1 33
57	26	M.	6 26	5 29	11 3	1 59	3	18	1	1½	Lib	9 50	2 28
58	27	Tu.	6 25	5 31	11 6	2 2	3	19	1¾	2¼	Sco	10 59	3 23
59	28	W.	6 23	5 32	11 9	2 5	3	20	2¾	3¼	Sco	morn	4 17
60	29	Th.	6 21	5 33	11 12	2 8	3	21	3¾	4¼	Sgr	0 05	5 11

FEBRUARY hath 29 days. [1940

For he, to whom we had applied
Our shopman's test of age and worth,
Was elemental when he died,
As he was ancient at his birth:
The saddest among kings of earth,
Bowed with a galling crown, this man
Met rancor with a cryptic mirth,
Laconic — and Olympian.

EDWIN ARLINGTON ROBINSON
"Lincoln"

D.M.	D.W.	Aspects, Holidays, Heights of High Water, etc.	Farmer's Calendar.
1	Th.	Oregon and Minnesota admitted as States, 1857 {9.9 8.7 *Light*	A pitchfork with but one prong, a dung-fork with a broken handle, a rake with three teeth only;—these are the tools of farmer Slouchy. You know him, my friends; yonder in his domicile, with an old pair of breeches stuffed in at the window, and where the leaky roof has to crouch to let the scanty chimney out. Is this the way to work it, with a farm of two hundred acres of as good land as ever Sir John Sinclair set foot upon? Alas! what of the soil without cultivation? What of improvement without spirit and ambition? Slouchy, thou camest from the line of the Muddlers, a stupid set; thou movest in the train of the Fuddlers, and so we gave thee up, as of little value or consequence in the concern of agriculture. Yet 'tis pity that this fine lot of land should suffer neglect; that this noble woodlot should be hacked in upon, and that some life-stirring Triptolemus of the sod should not have a chance here to show how the labor of man can turn the rich offerings of nature to his best advantage. But so it is, and so it will be. Slouchies will grow up in society, as well as thistles and thorns in the soil. We must suppose that there is nothing made in vain, and this is all the way we can account for the existence of many things.
2	Fr.	Purif. of Vir. Mary. ☿ Gr. Hel. ☿ Lat. S. Tides {9.7 8.4 *snows*	
3	Sa.	☾ runs low. Tides {9.5 8.3 *and clearing*	
4	C	Quinquagesima Sun. Tides {9.5 8.3	
5	M.	Roger Williams arrived in Boston from England, 1631 Tides {9.6 8.5	
6	Tu.	Shrove Tues. Tides {9.7 8.6	
7	W.	Ash Wed. □ ♁ ☉. {9.7 8.8 *Steady*	
8	Th.	♂☿☾. Tides {9.7 8.9 *cold*	
9	Fr.	Price of sperm oil in New Bedford soared to $1.30 per gallon, 1857 {9.7 —	
10	Sa.	☾ in Apogee Tides {9.0 9.5 *Brisk N. W.*	
11	C	1st S. in Lent ☾ on Eq. ♂♀☾. {9.0 9.3	
12	M.	♂ ☌ ☾. Abraham Lincoln born, 1809 {9.0 9.0 *winds*	
13	Tu.	♂♂♄.♂♄☾. ♂♂ ☾. Tides {8.9 8.7	
14	W.	St. Valentine Tides {8.8 8.4	
15	Th.	♂ ♁ ☾. Tides {8.7 8.1 *Warmer*	
16	Fr.	Alice Roosevelt married Congressman Nicholas Longworth, 1906 {8.7 7.9	
17	Sa.	Grand Duke Sergius killed by bomb in Kremlin, Moscow, 1905 {8.8 7.9	
18	C	2nd S. in Lent ☾ runs high. {9.1 8.1 *False*	
19	M.	Congress passed bill to retire the trade dollar, 1887 Tides {9.5 8.5	
20	Tu.	♂ ♀ ☌. Tides {10.0 9.1 *signs of spring*	
21	W.	☿ in ♌. Tides {10.5 9.7	
22	Th.	Geo. Washington born, 1732. Tides {11.0 10.4	
23	Fr.	☾ in Perigee. Tides {11.4 10.9 *Much*	
24	Sa.	St. Matthias ♀ in ♌. ♂ Ψ ☾. ☾ on Eq. {11.6 —	
25	C	3rd S. in Lent Tides {11.2 11.4 *colder*	
26	M.	☿ in Perih. Tides {11.3 11.1 *Snow turning*	
27	Tu.	Perforated postage stamps adopted in U. S., 1857 Tides {11.1 10.5	
28	W.	☿ Gr. elong. E. Tides {10.7 9.8 *to rain*	
29	Th.	Sgt. Carney, col., hero of Ft. Wagner, ap. mes. State House, Boston, 1901 {10.3 9.1	

From The Old Farmer's Almanac
February 1840

ASTRONOMICAL CALCULATIONS.

☉'s Declination.	Days.	d. m.	Days.	d. m.	Days.	d. m.	Days.	d. m.	Days.	d. m.
	1	7s. 27	7	5 08	13	2 47	19	0 25	25	1 57
	2	7 04	8	4 45	14	2 24	20	0s. 02	26	2 20
	3	6 41	9	4 22	15	2 00	21	0N. 22	27	2 44
	4	6 18	10	4 08	16	1 36	22	0 46	28	3 07
	5	5 55	11	3 35	17	1 13	23	1 10	29	3 31
	6	5 32	12	3 11	18	0 49	24	1 33	30	3 54

● New Moon, 8th day, 9h. 23m., evening, W.
☽ First Quarter, 16th day, 10h. 25m., evening, W.
○ Full Moon, 23rd day, 2h. 33m., evening, E.
☾ Last Quarter, 30th day, 11h. 20m., morning, W.

Day of Year.	Day of Month.	Day of the Week.	☉ Rises. h. m.	☉ Sets. h. m.	Length of Days. h. m.	Day's Incr. h. m.	Sun Fast. m.	Moon's Age.	Full Sea. Boston. Morn h.	Full Sea. Boston. Even h.	☽'s Place	☽ Rises. h. m.	☽ Souths. h. m.
61	1	Fr.	6 20	5 34	11 14	2 10	3	22	4¾	5¼	Sgr	1 04	6 05
62	2	Sa.	6 18	5 35	11 17	2 13	4	23	5¾	6¼	Cap	1 59	6 57
63	3	S.	6 17	5 37	11 20	2 16	4	24	6¾	7½	Cap	2 47	7 47
64	4	M.	6 15	5 38	11 23	2 19	4	25	7¾	8¼	Cap	3 30	8 36
65	5	Tu.	6 13	5 39	11 26	2 22	4	26	8¾	9¼	Aqr	4 08	9 23
66	6	W.	6 12	5 40	11 28	2 24	4	27	9½	10	Aqr	4 41	10 08
67	7	Th.	6 10	5 41	11 31	2 27	5	28	10¼	10½	Psc	5 12	10 51
68	8	Fr.	6 8	5 42	11 34	2 30	5	●	10¾	11¼	Psc	sets	11 34
69	9	Sa.	6 7	5 44	11 37	2 33	5	1	11½	11¾	Psc	6 30	0 16
70	10	S.	6 5	5 45	11 40	2 36	5	2	–	0	Ari	7 27	0 58
71	11	M.	6 3	5 46	11 43	2 39	6	3	0¼	0¾	Ari	8 25	1 41
72	12	Tu.	6 2	5 47	11 45	2 41	6	4	1	1¼	Tau	9 23	2 25
73	13	W.	6 0	5 48	11 48	2 44	6	5	1½	2	Tau	10 20	3 11
74	14	Th.	5 58	5 49	11 51	2 47	7	6	2¼	2¾	Tau	11 17	3 59
75	15	Fr.	5 57	5 51	11 54	2 50	7	7	3	3½	G'm	morn	4 49
76	16	Sa.	5 55	5 52	11 57	2 53	7	8	3¾	4½	G'm	0 14	5 41
77	17	S.	5 53	5 53	12 0	2 56	7	9	4¾	5½	Cnc	1 07	6 35
78	18	M.	5 51	5 54	12 3	2 59	8	10	5¾	6½	Cnc	1 58	7 30
79	19	Tu.	5 50	5 55	12 5	3 1	8	11	6¾	7¼	Leo	2 45	8 26
80	20	W.	5 48	5 56	12 8	3 4	8	12	7¾	8¼	Leo	3 28	9 22
81	21	Th.	5 46	5 58	12 12	3 8	9	13	8¾	9¼	Vir	4 09	10 18
82	22	Fr.	5 44	5 59	12 15	3 11	9	14	9½	10	Vir	4 47	11 14
83	23	Sa.	5 43	6 0	12 17	3 13	9	○	10½	11	Lib	rises	morn
84	24	S.	5 41	6 1	12 20	3 16	9	16	11¼	11¾	Lib	7 24	0 10
85	25	M.	5 39	6 2	12 23	3 19	10	17	–	0¼	Sco	8 38	1 06
86	26	Tu.	5 37	6 3	12 26	3 22	10	18	0½	1	Sco	9 47	2 03
87	27	W.	5 36	6 5	12 29	3 25	10	19	1½	2	Sgr	10 52	3 00
88	28	Th.	5 34	6 6	12 32	3 28	11	20	2¼	3	Sgr	11 51	3 55
89	29	Fr.	5 32	6 7	12 35	3 31	11	21	3¼	3¾	Sgr	morn	4 50
90	30	Sa.	5 30	6 8	12 38	3 34	11	22	4¼	4¾	Cap	0 43	5 42
91	31	S.	5 29	6 9	12 40	3 36	12	23	5¼	6	Cap	1 28	6 32

MARCH hath 31 days. [1940

Useless are weathercocks, warnings, thermometers,
Storm-drums and signals mean nothing to me!
Hopeless the conning of clouds and hygrometers —
No one can tell what the weather will be!

J. ASHBY-STERRY
"A Weather Wail"

D. M.	D. W.	Aspects, Holidays, Heights of High Water, etc.
1	Fr.	St. David. Tides {9.8 / 8.6} *Warmer*
2	Sa.	☾ Runs low. Tides {9.4 / 8.2} *then*
3	F	4th S. in Lent. Tides {9.1 / 8.2} *colder*
4	M.	Charter granted to Massachusetts Bay Colony, 1628 Tides {9.1 / 8.8}
5	Tu.	☿ Stat. in R. A. Tides {9.2 / 8.5}
6	W.	Col. Bowie and David Crockett killed in defense of the Alamo, 1836 {9.3 / 8.7}
7	Th.	☿ Gr. Hel. Lat. N. {9.4 / 8.9} *Snow*
8	Fr.	♂ ☿ ♄. Tides {9.5 / 9.1} *and rain*
9	Sa.	♂ ☿ ☾. ☾ in Apogee. ☾ on Eq. {9.5 / 9.3}
10	F	5th Sun. in Lent Tides {— / 9.4}
11	M.	♂ ♃ ☾. Tides {9.4 / 9.3}
12	Tu.	♂ ♄ ☾. ♂ ☿ ☾. {9.4 / 9.1} *Changeable,*
13	W.	♂ ♂ ☾. ♂ ♉ ☾. {9.3 / 8.8} *Blustery*
14	Th.	☿ Ψ ☉. Tides {9.2 / 8.5}
15	Fr.	♂ ☿ ☉. Inferior. Tides {9.1 / 8.3}
16	Sa.	♂ ♂ ♉. ☾ runs high Tides {9.0 / 8.1}
17	F	Palm Sun. St. Patrick. {9.1 / 8.2} *Fair*
18	M.	Battleship "Oregon" started race from San Francisco to Key West, 1898 {9.2 / 8.4}
19	Tu.	Banquet in Savannah in honor of General Lafayette, 1825 {9.5 / 8.9} *and*
20	W.	☉ enters ♈ Spring begins. Tides {10.0 / 9.6} *cold*
21	Th.	St. Benedict. Tides {10.5 / 10.3}
22	Fr.	Good Friday. Tides {11.0 / 10.9}
23	Sa.	♂ Ψ ☾. ☾ in Perigee. ☾ on Eq. Tides {11.3 / 11.4}
24	F	Easter Sunday. Tides {11.4 / 11.7}
25	M.	Annunc. or Lady Day Tides {— / 11.8}
26	Tu.	♂ ☿ ♉. Tides {11.6 / 10.9} *Much*
27	W.	☿ Stat. in R. A. {11.4 / 10.3} *warmer*
28	Th.	☿ in Perihelion. Tides {10.9 / 9.7}
29	Fr.	☾ runs low Tides {10.3 / 9.0}
30	Sa.	☿ in ♉. Tides {9.6 / 8.6}
31	F	1st Sun. af. Easter. Tides {9.1 / 8.3}

Farmer's Calendar.

Spraying

The spraying of trees and shrubs should be attended to while they are still dormant. There are innumerable pests to watch out for and especially those listed below:

TREE	INSECT
Apple	Apple Leaf Roller
	Apple Scab
	Aphids
	Red Bug
	San Jose Scale
Ash	Ash Scale
Beech	Beech Scale
Dogwood (Common)	Scurfy Scale
Elm	European Elm Scale
Lilac	San Jose Scale
Maple	Cottony Cushion Scale
Pear	Pear Scab
	San Jose Scale
	Psylla
Pine	Pine Leaf Scale
	Wooly Aphids
	Pine Shoot Moth
Poplar	Oyster Shell Scale
Spruce	Gall Aphid
	Shoot Moth
Tulip	Tulip Tree Lecanium
Willow	Oyster Shell Scale

1940] APRIL, Fourth Month.

ASTRONOMICAL CALCULATIONS.

☉'s Declination.

Days.	d. m.	Days.	d. m.	Days.	d. m.	Days.	d. m.	Days.	d. m.
1	4N.40	7	6 57	13	9 10	19	11 17	25	13 18
2	5 03	8	7 20	14	9 32	20	11 38	26	13 37
3	5 26	9	7 42	15	9 53	21	11 58	27	13 56
4	5 49	10	8 04	16	10 14	22	12 18	28	14 15
5	6 12	11	8 26	17	10 36	23	12 39	29	14 34
6	6 35	12	8 48	18	10 57	24	12 58	30	14 25

● New Moon, 7th day, 3h. 18m., evening, W.
☽ First Quarter, 15th day, 8h. 46m., morning, E.
○ Full Moon, 21st day, 11h. 37m., evening, E.
☾ Last Quarter, 29th day, 2h. 49m., morning, E.

Day of Year.	Day of Month.	Day of the Week.	☉ Rises. h. m.	☉ Sets. h. m.	Length of Days. h. m.	Day's Incr. h. m.	Sun Fast. m.	Moon's Age.	Full Sea, Boston. Morn h.	Full Sea, Boston. Even h.	☽'s Place	☽ Rises. h. m.	☽ Souths. h. m.
92	1	M.	5 27	6 10	12 43	3 39	12	24	6¼	7	Aqr	2 07	7 20
93	2	Tu.	5 25	6 11	12 46	3 42	12	25	7¼	7¾	Aqr	2 43	8 06
94	3	W.	5 24	6 12	12 48	3 44	12	26	8¼	8¾	Aqr	3 14	8 50
95	4	Th.	5 22	6 13	12 51	3 47	13	27	9	9¼	Psc	3 44	9 32
96	5	Fr.	5 20	6 14	12 54	3 50	13	28	9¾	10	Psc	4 12	10 15
97	6	Sa.	5 19	6 16	12 57	3 53	13	29	10¼	10½	Ari	4 40	10 57
98	7	S.	5 17	6 17	13 0	3 56	14	●	11	11¼	Ari	sets	11 40
99	8	M.	5 15	6 18	13 3	3 59	14	1	11½	11¾	Ari	7 17	0 24
100	9	Tu.	5 13	6 19	13 6	4 2	14	2	—	0¼	Tau	8 15	1 09
101	10	W.	5 12	6 20	13 8	4 4	14	3	0½	1	Tau	9 12	1 56
102	11	Th.	5 10	6 21	13 11	4 7	15	4	1	1½	G'm	10 09	2 46
103	12	Fr.	5 8	6 22	13 14	4 10	15	5	1¾	2¼	G'm	11 03	3 37
104	13	Sa.	5 7	6 24	13 17	4 13	15	6	2½	3	Cnc	11 54	4 29
105	14	S.	5 5	6 25	13 20	4 16	15	7	3¼	4	Cnc	morn	5 22
106	15	M.	5 4	6 26	13 22	4 18	16	8	4¼	5	Cnc	0 41	6 16
107	16	Tu.	5 2	6 27	13 25	4 21	16	9	5¼	6	Leo	1 23	7 10
108	17	W.	5 0	6 28	13 28	4 24	16	10	6¼	7	Leo	2 04	8 04
109	18	Th.	4 59	6 29	13 30	4 26	16	11	7¼	8	Vir	2 41	8 58
110	19	Fr.	4 57	6 30	13 33	4 29	17	12	8¼	8¾	Vir	3 17	9 53
111	20	Sa.	4 55	6 31	13 36	4 32	17	13	9¼	9¾	Lib	3 54	10 48
112	21	S.	4 54	6 33	13 39	4 35	17	○	10¼	10½	Lib	rises	11 45
113	22	M.	4 52	6 34	13 42	4 38	17	15	11	11½	Sco	7 23	morn
114	23	Tu.	4 51	6 35	13 44	4 40	17	16	0	—	Sco	8 32	0 42
115	24	W.	4 49	6 36	13 47	4 43	18	17	0¼	0¾	Sgr	9 36	1 39
116	25	Th.	4 48	6 37	13 49	4 45	18	18	1	1¾	Sgr	10 32	2 36
117	26	Fr.	4 47	6 38	13 51	4 47	18	19	2	2½	Cap	11 22	3 31
118	27	Sa.	4 45	6 39	13 54	4 50	18	20	2¾	3½	Cap	morn	4 24
119	28	S.	4 44	6 40	13 56	4 52	18	21	3¾	4½	Aqr	0 05	5 14
120	29	M.	4 42	6 41	13 59	4 55	18	22	4¾	5¼	Aqr	0 43	6 01
121	30	Tu.	4 41	6 43	14 2	4 58	19	23	5¾	6¼	Aqr	1 15	6 46

APRIL hath 30 days. [1940

After the silence long
On valley and hill,
Listen, — again the song
Of the silver rill!

FRANK DEMPSTER SHERMAN
"April"

D. M.	D. W.	Aspects, Holidays, Heights of High Water, Etc.
1	M.	White Star St. "Atlantic" sank, 500 drowned, 1873 {8.9 8.2} *River ice*
2	Tu.	Cong passed act est. mint in Philadelphia, 1792 {8.8 8.4} *breaking*
3	W.	Nightwatch in Bos. or. to cry hourly time of night & state of weather, 1735 {8.8 8.6}
4	Th.	Henry Hudson sailed from Holland on exploring exped. to America, 1609 {8.9 8.9}
5	Fr.	☾ Apogee. ☾ in ☌ on E. ☊. ☿ ☌ ☾. {9.1 9.2} *Fair and*
6	Sa.	Battle of Shiloh or Pittsburg Landing, 1862 {9.2 9.4} *warmer*
7	F	2nd Sun. a. E. ☉ Annular Eclipse, vis. in N. E.
8	M.	♂ ♄ ☾. Tides {9.3 9.8} [7th ♃ ☌ ☾. {9.3 9.6}
9	Tu.	Surrender of Lee to Grant at Appomatox Court House, Va., 1865 {– 9.3}
10	W.	☿ in Aphelion. ♂ ☉ ☾. ♂ ☿ ☾. {9.8 9.1}
11	Th.	♂ ♂ ☾. ♂ ☿ ☾. ♂ ♃ ☉. Tides {9.8 8.9}
12	Fr.	☿ Gr. elong. W. Tides {9.7 8.7} *Showers and*
13	Sa.	☾ runs high. Tides {9.6 8.6} *milder*
14	F	3rd Sun. af. Easter. Tides {9.4 8.5}
15	M.	English settlers arrived at New Haven, Conn., 1638 Tides {9.4 8.6}
16	Tu.	Province of New Jersey offered for sale in England for $25,000, 1681 {9.4 8.9}
17	W.	♀ Gr. elong. E. Tides {9.8 9.4} *Rain*
18	Th.	Four Indian chfs fr. Can. arrv'd in Lond. for aud. with Q. Victoria, 1710 {9.9 10.1}
19	Fr.	☾ on Eq. ♂ ♆ ☾. ♀ Gr. Hel. Lat. N. Tides {10.3 10.7}
20	Sa.	☾ in Perigee. Tides {10.7 11.3}
21	F	4th Sun. af. Easter. Tides {10.9 11.7}
22	M.	Contract signed transferring Panama Canal to United States, 1904 {11.0 11.8}
23	Tu.	St. George. Tides {10.8 –} *Sun-showers*
24	W.	♂ ♄ ☉. Tides {11.7 10.5}
25	Th.	St. Mark. ☾ runs low. Tides {11.8 10.0}
26	Fr.	John Wilkes Booth, who assas. Lincoln shot nr. Bowling Gr., Va., 1865 {10 8 9.5}
27	Sa.	President Grant buried at Grant's Tomb, Riverside Dr., N.Y.C., 1897 {10.1 9.0}
28	F	Rogation S. Daylight Saving Begins Tides {9 5 8.6}
29	M.	Coxey's Army started march to Washington, D. C., 1894 {9.0 8.4} *Late*
30	Tu.	Opening of N. Y. World's Fair, 1939 ☿ Gr. Hel. Lat. S. {8.6 8.4} *frosts*

Farmer's Calendar.

Poultry

The first of April is not too early to plan for the pullet eggs which will be needed when production has dropped in the laying pens. Then customers always demand more eggs and large ones. Early maturing and early housed pullets help to solve the scarcity problem when the highest prices prevail.

April chicks work in well with other farm activities. They require much attention during the first weeks; temperature must be watched carefully and feed containers filled often. Once over the danger period, and with larger hoppers and fountains, they can be left more to themselves during the rush of planting, spraying, etc. The feed program is simple after the cockerels are separated from the pullets, especially if you choose the all-mash system.

The best time to vaccinate for chicken pox is when the pullets are moved to their summer range. This is easy to do. It seldom affects the birds noticeably and it does insure uninterrupted production later.

An orchard makes an excellent range, providing shade, so essential in the hot months, and a rank growth of grass. Leghorns soon forsake their shelters for the branches of the trees at night.

Miriam E. Warren

ASTRONOMICAL CALCULATIONS.

☉'s Declination.

Days.	d. m.	Days.	d. m.	Days.	d. m.	Days.	d. m.	Days.	d. m.
1	15N. 11	7	16 54	13	18 28	19	19 50	25	21 01
2	15 28	8	17 11	14	18 42	20	20 03	26	21 11
3	15 46	9	17 27	15	18 57	21	20 15	27	21 21
4	16 04	10	17 42	16	19 10	22	20 27	28	21 31
5	16 21	11	17 58	17	19 24	23	20 39	29	21 40
6	16 38	12	18 13	18	19 37	24	20 50	30	21 49

● New Moon, 7th day, 5h. 7m., morning, E.
☽ First Quarter, 14th day, 3h. 51m., evening, E.
○ Full Moon, 21st day, 8h. 33m., morning, W.
☾ Last Quarter, 28th day, 7h. 40m., evening, E.

Day of Year.	Day of Month.	Day of the Week.	☉ Rises. h. m.	☉ Sets. h. m.	Length of Days. h. m.	Day's Incr. h. m.	Sun Fast. m.	Moon's Age.	Full Sea, Boston. Morn h.	Full Sea, Boston. Even h.	☽'s Place	☽ Rises. h. m.	☽ Souths. h. m.
122	1	W.	4 40	6 44	14 4	5 0	19	24	6½	7¼	Psc	1 46	7 30
123	2	Th.	4 38	6 45	14 7	5 3	19	25	7½	8	Psc	2 15	8 12
124	3	Fr.	4 37	6 46	14 9	5 5	19	26	8¼	8¾	Ari	2 42	8 54
125	4	Sa.	4 36	6 47	14 11	5 7	19	27	9	9½	Ari	3 11	9 37
126	5	♋	4 34	6 48	14 14	5 10	19	28	9¾	10	Ari	3 40	10 20
127	6	M.	4 33	6 49	14 16	5 12	19	29	10½	10¾	Tau	4 11	11 06
128	7	Tu.	4 32	6 50	14 18	5 14	19	●	11¼	11¼	Tau	sets	11 53
129	8	W.	4 31	6 51	14 20	5 16	19	1	11¾	0	G'm	8 03	0 42
130	9	Th.	4 29	6 52	14 23	5 19	19	2	—	0½	G'm	9 00	1 33
131	10	Fr.	4 28	6 54	14 26	5 22	19	3	0¾	1¼	G'm	9 52	2 26
132	11	Sa.	4 27	6 55	14 28	5 24	19	4	1½	2	Cnc	10 40	3 19
133	12	♋	4 26	6 56	14 30	5 26	19	5	2¼	2¾	Cnc	11 23	4 12
134	13	M.	4 25	6 57	14 32	5 28	20	6	3	3¾	Leo	morn	5 05
135	14	Tu.	4 24	6 58	14 34	5 30	20	7	4	4½	Leo	0 04	5 58
136	15	W.	4 23	6 59	14 36	5 32	20	8	5	5½	Vir	0 41	6 50
137	16	Th.	4 22	7 0	14 38	5 34	19	9	6	6½	Vir	1 16	7 43
138	17	Fr.	4 21	7 1	14 40	5 36	19	10	7	7½	Lib	1 51	8 36
139	18	Sa.	4 20	7 2	14 42	5 38	19	11	8	8½	Lib	2 27	9 30
140	19	♋	4 19	7 3	14 44	5 40	19	12	9	9¼	Sco	3 04	10 26
141	20	M.	4 18	7 4	14 46	5 42	19	13	10	10¼	Sco	3 46	11 23
142	21	Tu.	4 17	7 5	14 48	5 44	19	○	10¾	11	Sgr	rises	morn
143	22	W.	4 16	7 6	14 50	5 46	19	15	11¾	11¾	Sgr	8 18	0 20
144	23	Th.	4 16	7 7	14 51	5 47	19	16	—	0½	Cap	9 12	1 17
145	24	Fr.	4 15	7 8	14 53	5 49	19	17	0¾	1¼	Cap	9 59	2 12
146	25	Sa.	4 14	7 9	14 55	5 51	19	18	1½	2¼	Cap	10 40	3 04
147	26	♋	4 13	7 9	14 56	5 52	19	19	2¼	3	Aqr	11 16	3 54
148	27	M.	4 13	7 10	14 57	5 53	19	20	3¼	3¾	Aqr	11 47	4 41
149	28	Tu.	4 12	7 11	14 59	5 55	19	21	4	4¾	Psc	morn	5 25
150	29	W.	4 11	7 12	15 1	5 57	18	22	5	5½	Psc	0 17	6 08
151	30	Th.	4 11	7 13	15 2	5 58	18	23	6	6½	Psc	0 45	6 51
152	31	Fr.	4 10	7 14	15 4	6 0	18	24	6¾	7¼	Ari	1 13	7 33

MAY hath 31 days. [1940

I want to go to Boston! There's something in the air —
The breath of spring; some restless germ unnamed; it's everywhere —
That somehow makes my spirit loathe all tasks and discipline,
And seasonably stirs it up to bolt the rut it's in.

EDWARD SANDFORD MARTIN
"Spring Fever"

D.M.	D.W.	Aspects, Holidays, Heights of High Water, etc.	Farmer's Calendar.
1	W.	St. Philip & St. James. {8.5 8.5 *Bright warm*	Fertilizer is expensive. Why buy and spread on your soil anything but the right kind and the right amount? To accomplish this it is only necessary to know what your soil needs, and there has recently been developed a very simple soil testing outfit which anyone can use. The use of such an outfit takes all guess out of the fertilizer problem, saves buying what is not needed and insures your soil getting whatever it lacks. The procedure in using this test is extremely simple: a small amount of soil is placed in a test tube, the testing solution added and shaken up. According to the needs of the soil various colors result. By comparing this color with a transparent color chart one knows at once what is needed, both as to type and amount. There is no longer any necessity of sending soil samples to a laboratory to be analyzed — a process which may be expensive and sometimes unsatisfactory. Get an outfit this year. They are inexpensive and should save many times their cost in one season. Your county agent can tell you all about them and no doubt agricultural supply houses and seed stores can give the necessary information.
2	Th.	Ascen. Day. ☾ in Apo. ☾ on Eq. {8.5 8.3 *days,*	
3	Fr.	Lrg. sec. of Jacksonville, Fla., des. by fire, 1901 {8.6 9.1 *cool nights*	
4	Sa.	Six policemen killed by anarchists in Haymarket Riot, Chicago, 1886 {8.8 9.4	
5	F	Sun. a. As. ☌ ☿ ☊. ☌ ☊ ☾. ☌ ☿ ☾.	
6	M.	☌ ♄ ☾. Tides {9.1 9.9 [5th Tides {8.9 9.6	
7	Tu.	☌ ☉ ☾. Tides {9.2 10.1	
8	W.	Joan of Arc raised the Siege of Orleans, 1429 Tides {9.2 10.2	
9	Th.	Indian Chief, Pontiac, began his blockade of Detroit, 1763 {— 9.2	
10	Fr.	☾ Runs high ☌ ☿ ♄. ☌ ♂ ☾. ☌ ♀ ☾. {10.2 9.1	
11	Sa.	Ensign Worth Bagley killed, first off. to be killed in Span. War, 1898 {10.2 9.0	
12	F	Whit Sun. ☌ ☉ ☉. Tides {10.0 9.0	
13	M.	U. S. declared war on Mexico, 1846 Tides {9.8 9.0 *Showers*	
14	Tu.	Mexico acknowl. independ. of Texas by treaty, 1836 Tides {9.7 9.2	
15	W.	Ground broken for State House, Beacon Hill, Boston, 1795 {9.6 9.4	
16	Th.	☌ ♆ ☾. ☾ on Eq. {9.6 9.9 *Colder,*	
17	Fr.	☌ ☿ ☉. {9.7 10.4 *threatening frosts*	
18	Sa.	☾ in Perigee. Tides {9.9 10.9	
19	F	Trinity Sun. ☿ in ♌. Tides {10.1 11.3	
20	M.	♀ Greatest Brilliancy Tides {10.3 11.6	
21	Tu.	☌ ☿ ☉ Sup. Tides {10.3 11.6 *Warmer*	
22	W.	S. S. Savannah, first steamer to cr. Atlantic, st. fr. Savannah, Ga., 1819 {10.2 11.4	
23	Th.	Corpus Christi. ☾ runs low. {— 10.0 *Showers*	
24	Fr.	☿ in Perihelion. {11.1 9.7 *Good*	
25	Sa.	Name of Yale College officially chgd. to Yale University, 1887 {10.6 9.3	
26	F	1st. S. af. Trin. Tides {10.0 9.0 *growing*	
27	M.	Charles Lindbergh married Anne Morrow, 1929 {9.4 8.7 *weather*	
28	Tu.	Washington defeated Jumonville at Great Meadows, 1754 Tides {8.9 8.6	
29	W.	Ballot law model. on Australian sys. adopted by U. S. Legislature, 1888 {8.5 8.5	
30	Th.	Mem. Day. ☾ in Apogee. ☾ on Eq. {8.3 8.6	
31	Fr.	Johnstown Flood, 2295 drowned, 1893 Tides {8.2 8.8 *Cooler*	

Edward Wigglesworth

ASTRONOMICAL CALCULATIONS.

☉'s Declination.

Days.	d. m.	Days.	d. m.	Days.	d. m.	Days.	d. m.	Days.	d. m.	Days.	d. m.
1	22N.06	7	22 47	13	23 14	19	23 26	25	23 23		
2	22 14	8	22 52	14	23 17	20	23 26	26	23 21		
3	22 21	9	22 58	15	23 20	21	23 27	27	23 19		
4	22 28	10	23 02	16	23 22	22	23 26	28	23 16		
5	22 35	11	23 07	17	23 24	23	23 26	29	23 13		
6	22 41	12	23 10	18	23 25	24	23 24	30	23 09		

● New Moon, 5th day, 8h. 5m., evening, W.
☽ First Quarter, 12th day, 8h. 59m., evening, E.
○ Full Moon, 19th day, 6 h. 2m., evening, E.
☾ Last Quarter, 27th day, 1h. 13m., evening, W.

Day of Year.	Day of Month.	Day of the Week.	☉ Rises. h. m.	☉ Sets. h. m.	Length of Days. h. m.	Day's Incr. h. m.	Sun Fast. m.	Moon's Age.	Full Sea, Boston. Morn h.	Full Sea, Boston. Even h.	☽'s Place	☽ Rises. h. m.	☽ Souths. h. m.
153	1	Sa.	4 10	7 14	15 5	6 1	18	25	7¾	8	Ari	1 41	8 16
154	2	♋	4 9	7 15	15 6	6 2	18	26	8½	8¾	Tau	2 12	9 00
155	3	M.	4 9	7 16	15 7	6 3	18	27	9¼	9½	Tau	2 44	9 47
156	4	Tu.	4 9	7 17	15 8	6 4	18	28	10	10¼	Tau	3 22	10 35
157	5	W.	4 8	7 17	15 9	6 5	17	●	10¾	10¾	G'm	sets	11 26
158	6	Th.	4 8	7 18	15 10	6 6	17	1	11½	11½	G'm	7 47	0 19
159	7	Fr.	4 8	7 19	15 11	6 7	17	2	—	0	Cnc	8 38	1 14
160	8	Sa.	4 7	7 19	15 12	6 8	17	3	0¼	0¾	Cnc	9 24	2 08
161	9	♋	4 7	7 20	15 13	6 9	17	4	1	1½	Leo	10 05	3 02
162	10	M.	4 7	7 20	15 14	6 10	16	5	1¾	2½	Leo	10 43	3 55
163	11	Tu.	4 7	7 21	15 14	6 10	16	6	2¾	3¼	Vir	11 19	4 47
164	12	W.	4 7	7 21	15 14	6 10	16	7	3½	4¼	Vir	11 53	5 39
165	13	Th.	4 7	7 22	15 15	6 11	16	8	4½	5¼	Lib	morn	6 31
166	14	Fr.	4 7	7 22	15 15	6 11	16	9	5¾	6¼	Lib	0 28	7 23
167	15	Sa.	4 7	7 23	15 16	6 12	15	10	6¾	7¼	Lib	1 04	8 16
168	16	♋	4 7	7 23	15 16	6 12	15	11	7¾	8¼	Sco	1 41	9 11
169	17	M.	4 7	7 23	15 16	6 12	15	12	8¾	9	Sco	2 23	10 07
170	18	Tu.	4 7	7 24	15 17	6 13	15	13	9¾	10	Sgr	3 10	11 03
171	19	W.	4 7	7 24	15 17	6 13	15	○	10½	10¾	Sgr	rises	11 59
172	20	Th.	4 7	7 24	15 17	6 13	14	15	11¼	11½	Cap	7 50	morn
173	21	Fr.	4 7	7 24	15 17	dec	14	16	—	0¼	Cap	8 35	0 53
174	22	Sa.	4 8	7 25	15 17	0 0	14	17	0¼	1	Aqr	9 13	1 44
175	23	♋	4 8	7 25	15 17	0 0	14	18	1	1¾	Aqr	9 47	2 33
176	24	M.	4 8	7 25	15 17	0 0	13	19	2	2½	Psc	10 18	3 19
177	25	Tu.	4 8	7 25	15 17	0 0	13	20	2¾	3¼	Psc	10 47	4 03
178	26	W.	4 9	7 25	15 16	0 1	13	21	3½	4	Psc	11 15	4 46
179	27	Th.	4 9	7 25	15 16	0 1	13	22	4¼	4¾	Ari	11 43	5 28
180	28	Fr.	4 10	7 25	15 15	0 2	13	23	5	5¾	Ari	morn	6 11
181	29	Sa.	4 10	7 25	15 15	0 2	12	24	6	6½	Ari	0 12	6 54
182	30	♋	4 10	7 25	15 15	0 2	12	25	7	7¼	Tau	0 43	7 39

JUNE hath 30 days. [1940

The perfect disc of the sacred moon
Through still blue heaven serenely swims,
And the lone bird's liquid music brims
The peace of the night with a perfect tune.

JOHN MASEFIELD
"Midsummer Night"

D. M.	D. W.	Aspects, Holidays, Heights of High Water, etc.
1	Sa.	Nicomede. Tides {8.3 / 9.1
2	F	2d S. af. Trin. ☌ ☿ ☾. Tides {8.4 / 9.4
3	M.	☌ ♄ ☾. ☿ Gr. Hel. Lat. N. ♆ Stat. in R.A. {8.6 / 9.7
4	Tu.	☌ ☉ ☾. ♀ Stat. in R.A. Tides {8.8 / 10.0
5	W.	Financial panic in Chicago, 1893 Tides {9.0 / 10.3
6	Th.	☾ runs high. {9.1 / 10.5 *Showers*
7	Fr.	☌ ☿☍. ☌ ☿ ☾. ☌ ♀ ☾. Tides {— / 9.3
8	Sa.	King and Queen of Eng. visit Wash., D. C., 1939. ☌ ☍ ☾. {10.6 / 9.4
9	F	3rd S. af. Tr. {10.6 / 9.5 *Changeable*
10	M.	Bat. of Bethel, Fed. def., Fed. troops fired upon one another by mis., 1861 {10.5 / 9.6
11	Tu.	St. Barnabas. ☌ ☿ ♀. Tides {10.3 / 9.6
12	W.	Pres. Cleveland issued proclam. against Cuban filibusters, 1895 {10.0 / 9.7
13	Th.	☾ on Eq. ☌ ♆ ☾. □ ♆ ☉. {9.7 / 9.9
14	Fr.	☾ in Peri. ♀ in ♉. {9.5 / 10.1 *Fair and*
15	Sa.	Longest morning (Boston) Tides {9.4 / 10.4 *warmer*
16	F	4th Sun. af. Tr. ☌ ☿ ☍. {9.4 / 10.7
17	M.	Battle of Charlestown, Bunker Hill, Gen. Joseph Warren killed, 1775 {9.5 / 11.0
18	Tu.	Battle of Waterloo, Napoleon's power completely broken, 1815 {9.6 / 11.1
19	W.	☾ runs low. Tides {9.7 / 11.1
20	Th.	Access. of Queen Victoria to throne, 1837 Tides {9.7 / 11.0
21	Fr.	☉ enters ♋. SUMMER BEGINS. {— / 9.6 *Thunder*
22	Sa.	Tides {10.7 / 9.4 *Showers*
23	F	5th Sun. af. Tr. Tides {10.3 / 9.2
24	M.	St. John, Baptist. ☿ Greatest elong. E. Tides {9.8 / 9.0
25	Tu.	Telephone first exhibited, Centennial Exhibition, Phila. 1876 {9.3 / 8.8 *Fair,*
26	W.	☾ on Eq. ☌ ♀ ☉ Inf. ☿ in ♋. Longest Afternoon (Boston)
27	Th.	☾ in Apo. {8.5 / 8.6 [26th {8.9 / 8.7 *Cooler*
28	Fr.	Molly Pitcher manned a gun in battle nr. Freehold, N. J., 1878 {8.2 / 8.6
29	Sa.	St. Peter & St. Paul. {8.0 / 8.8 *Warm, Showers*
30	F	6th S. a. Tr ☌ ☿☾. ☌ ♄ ☾. {8.0 / 9.0

Farmer's Calendar.

The Garden

"All England is a garden," and the English countryside is the most civilized corner of the earth. Is this because close contact with the soil and a sound sense of values seem to go hand in hand?

The mark of a planter in any community is a part of the way of life. Massachusetts gardening, as most American gardening, is descended from Kew Gardens.

Rochester, N. Y. will for hundreds of years be a more beautiful community to live in because a great nursery was established there.

Long Island owes more than can ever be realized to the old Parsons Nursery in Flushing.

Rhododendron and azalea gardens in this country will for all the future be more attractive and interesting because of the intelligent and thoughtful hybridizing and study of these plants by a man living in Sandwich, Mass.

On one new street in Victoria, British Columbia, moved an earnest gardener a few years ago. The attractiveness of the entire street reflects Mr. Steele's influence. The whole neighborhood is transformed.

The entire metropolitan area of New York will be a monument to the social vision of a certain Park Commissioner as long as New York survives.

The flower garden, planting your own dwelling place, is an integral factor in enriching the coming days in America.

S. A. Everitt

1940] JULY, SEVENTH MONTH.

ASTRONOMICAL CALCULATIONS.

☉'s Declination.

Days.	d. m.	Days.	d. m.	Days.	d. m.	Days.	d. m.	Days.	d. m.	Days.	d. m.
1	23N.05	7	22 33	13	21 47	19	20 48	25	19 35		
2	23 01	8	22 26	14	21 38	20	20 36	26	19 22		
3	22 56	9	22 19	15	21 29	21	20 25	27	19 09		
4	22 51	10	22 12	16	21 19	22	20 13	28	18 55		
5	22 46	11	22 04	17	21 09	23	20 01	29	18 41		
6	22 40	12	21 55	18	20 58	24	19 48	30	18 26		

● New Moon, 5th day, 6h. 28m., morning, E.
☽ First Quarter, 12th day, 1h. 35m., morning, W.
○ Full Moon, 19th day, 4h. 55m., morning, W.
☾ Last Quarter, 27th day, 6h. 29m., morning, W.

Day of Year.	Day of Month.	Day of the Week.	☉ Rises. h. m.	☉ Sets. h. m.	Length of Days. h. m.	Day's Decr. h. m.	Sun Fast. m.	Moon's Age.	Full Sea, Boston. Morn h.	Full Sea, Boston. Even h.	☽'s Place	☽ Rises. h. m.	☽ Souths. h. m.
183	1	M.	4 11	7 25	15 14	0 3	12	26	7¾	8	Tau	1 18	8 27
184	2	Tu.	4 12	7 25	15 13	0 4	12	27	8½	8¾	G'm	1 58	9 17
185	3	W.	4 12	7 24	15 12	0 5	12	28	9½	9¾	G'm	2 44	10 09
186	4	Th.	4 13	7 24	15 11	0 6	11	29	10¼	10½	Cnc	3 36	11 03
187	5	Fr.	4 13	7 24	15 11	0 6	11	●	11	11¼	Cnc	sets	11 59
188	6	Sa.	4 14	7 24	15 10	0 7	11	1	11¾	0	Leo	8 03	0 55
189	7	S.	4 14	7 23	15 9	0 8	11	2	—	0½	Leo	8 44	1 50
190	8	M.	4 15	7 23	15 8	0 9	11	3	0¾	1¼	Vir	9 21	2 43
191	9	Tu.	4 16	7 22	15 6	0 11	11	4	1½	2	Vir	9 57	3 36
192	10	W.	4 17	7 22	15 5	0 12	11	5	2½	3	Vir	10 32	4 28
193	11	Th.	4 17	7 21	15 4	0 13	10	6	3¼	4	Lib	11 06	5 20
194	12	Fr.	4 18	7 21	15 3	0 14	10	7	4¼	4¾	Lib	11 43	6 13
195	13	Sa.	4 19	7 20	15 1	0 16	10	8	5¼	5¾	Sco	morn	7 06
196	14	S.	4 20	7 20	15 0	0 17	10	9	6½	6¾	Sco	0 23	8 00
197	15	M.	4 20	7 19	14 59	0 18	10	10	7½	7¾	Sgr	1 07	8 55
198	16	Tu.	4 21	7 19	14 58	0 19	10	11	8½	8¾	Sgr	1 56	9 50
199	17	W.	4 22	7 18	14 56	0 21	10	12	9½	9¾	Cap	2 48	10 44
200	18	Th.	4 23	7 17	14 54	0 23	10	13	10¼	10½	Cap	3 45	11 36
201	19	Fr.	4 24	7 16	14 52	0 25	10	○	11	11¼	Aqr	rises	morn
202	20	Sa.	4 25	7 16	14 51	0 26	10	15	11¾	0	Aqr	7 47	0 25
203	21	S.	4 26	7 15	14 49	0 28	9	16	—	0½	Aqr	8 19	1 13
204	22	M.	4 27	7 14	14 47	0 30	9	17	0¾	1¼	Psc	8 48	1 58
205	23	Tu.	4 28	7 13	14 45	0 32	9	18	1½	1¾	Psc	9 17	2 42
206	24	W.	4 29	7 12	14 43	0 34	9	19	2	2½	Ari	9 45	3 24
207	25	Th.	4 29	7 11	14 42	0 35	9	20	2¾	3¼	Ari	10 13	4 06
208	26	Fr.	4 30	7 10	14 40	0 37	9	21	3½	4	Ari	10 44	4 49
209	27	Sa.	4 31	7 9	14 38	0 39	9	22	4½	4¾	Tau	11 16	5 33
210	28	S.	4 32	7 8	14 36	0 41	9	23	5¼	5¾	Tau	11 53	6 19
211	29	M.	4 33	7 7	14 34	0 43	9	24	6¼	6½	G'm	morn	7 07
212	30	Tu.	4 34	7 6	14 32	0 45	9	25	7	7½	G'm	0 36	7 57
213	31	W.	4 35	7 5	14 30	0 47	10	26	8	8¼	G'm	1 24	8 50

JULY hath 31 days. [1940

The pedigree of honey
Does not concern the bee;
A clover, any time, to him
Is aristocracy.

EMILY DICKINSON

D.M.	D.W.	Aspects, Holidays, Heights of High Water, etc.
1	M.	☌☉☾. {8.1 9.3 *Frequent Showers*
2	Tu.	Battle of Santiago, America's one victory over Adm. Cervera, 1898 {8.3 9.7
3	W.	First day of Gettysburg, Confederates were def. after three days, 1863 {8.6 10.1
4	Th.	Independ. Day ⊕ in Aph. ☌☿☾. ☾ runs high. {8.9 10.5
5	Fr.	Americans abandoned Ft. Ticonderoga, 1777 Tides {9.3 10.8 *Poor*
6	Sa.	☌☌☾. ☌☿☾. Tides {9.6 11.0
7	F	7th S. af. Tr. ☿ in Aph. ☿ Stat. in R. A. {— 9.9
8	M.	Lib. Bell cracked, while being tolled in hon. Chf. Jus. Marshall, dec., 1835 {11.1 10.1
9	Tu.	☌☿☌. ☾ in Per. Tides {10.9 10.2 *haying*
10	W.	☌Ψ☾. ☾ on Eq. {10.6 10.3 *weather*
11	Th.	Alexander Hamilton killed by Aaron Burr in duel, 1804 Tides {10.2 10.3
12	Fr.	Henry D. Thoreau born, 1817 {9.7 10.2 *Southwest*
13	Sa.	Marat assassinated in his bath by Charlotte Corday, 1793 Tides {9.8 10.2
14	F	8th Sun. af. Tr. Tides {9.0 10.2 *winds*
15	M.	St. Swithin Tides {8.9 10.3
16	Tu.	☾ runs low Tides {9.0 10.5 *Warmer*
17	W.	Utah admitted to the Union as a state, 1894 Tides {9.1 10.6
18	Th.	☿ Stat. in R. A. Tides {9.2 10.6
19	Fr.	☿ in Aphelion Tides {9.3 10.5 *Fair*
20	Sa.	St. Margaret. ☌ Gr. Hel. Lat. N. Tides {9.4 10.3
21	F	9th Sun. af. Trin. Tides {— 9.3
22	M.	St. Mary Magdalene. ☌☿☉ Inf. {10.1 9.3
23	Tu.	U. S. Nav. squad. arrived Annapolis with body of John Paul Jones, 1905 {9.7 9.2
24	W.	☾ on Eq. {9.3 9.0 *Thunderstorms,*
25	Th.	St. James. ☾ in Apo. Dog days begin {8.9 8.9
26	Fr.	St. Anne. Tides {8.6 8.8 *Hail*
27	Sa.	☿ Gr. Hel. Lat. S. ☌ ☿ ☾. Tides {8.2 8.7
28	F	10th S. a. Tr. ☌♄☾. ☌☊☾. {7.9 8.8
29	M.	Completion of Atlantic cable, 1866 Tides {7.9 8.9 *Very hot*
30	Tu.	Found. laid for Carnegie Peace Palace at The Hague, 1907 Tides {7.9 9.3
31	W.	☾ runs high. ☌☿☾. Tides {8.2 9.7

Are You Afraid of Thunderstorms?

About this time of year the showers that were gentle in April develop other characteristics not the least of which is noise, which remind us all that the season of real thunderstorms is with us. While this is of no particular concern to the house owner in the city, due to the natural protection afforded by closely located buildings, electric lines, etc., the home owner in the country and rural areas has to provide his own protection in the form of lightning rod systems. Even though these have been regarded as being of doubtful value, it is now a well-established scientific fact that they are the most reliable protection known — provided they are properly installed and maintained in good operating order.

The few rumblings should remind us to check at once on the rodding system we have and be sure it is in the condition we hope it is in; that it is really a protective device and not a liability—for it may certainly be a liability if all joints, connections and points are not solidly made up, especially the connections on the "ground" rods. A few dollars spent in having the system checked up is good insurance —and one should not wait longer to have it done. Lightning strikes when and where it is least expected.

G. M. Foulkrod

1940] AUGUST, Eighth Month.

ASTRONOMICAL CALCULATIONS.

☉'s Declination.	Days.	d. m.	Days.	d. m.	Days.	d. m.	Days.	d. m.	Days.	d. m.
	1	17N.57	7	16 20	13	14 35	19	12 40	25	10 39
	2	17 41	8	16 03	14	14 16	20	12 21	26	10 18
	3	17 26	9	15 46	15	13 57	21	12 01	27	9 57
	4	17 10	10	15 28	16	13 38	22	11 41	28	9 36
	5	16 53	11	15 11	17	13 19	23	11 20	29	9 15
	6	16 37	12	14 53	18	13 00	24	11 00	30	8 53

● New Moon, 3rd day, 3h. 9m., evening, W.
☽ First Quarter, 10th day, 7h. 0m., morning, E.
○ Full Moon, 17th day, 6h. 2m., evening, E.
☾ Last Quarter, 25th day, 10h. 33m., evening, E.

Day of Year.	Day of Month.	Day of the Week.	☉ Rises. h. m.	☉ Sets. h. m.	Length of Days. h. m.	Day's Decr. h. m.	Sun Fast. m.	Moon's Age.	Full Sea, Boston. Morn h.	Full Sea, Boston. Even h.	☽'s Place	☽ Rises. h. m.	☽ Souths. h. m.
214	1	Th.	4 36	7 4	14 28	0 49	10	27	9	9¼	Cnc	2 19	9 45
215	2	Fr.	4 37	7 3	14 26	0 51	10	28	9¾	10	Cnc	3 21	10 41
216	3	Sa.	4 38	7 1	14 23	0 54	10	●	10½	10¾	Leo	sets	11 37
217	4	S.	4 40	7 0	14 20	0 57	10	1	11¼	11½	Leo	7 20	0 33
218	5	M.	4 41	6 59	14 18	0 59	10	2	—	0	Vir	7 56	1 28
219	6	Tu.	4 42	6 58	14 16	1 1	10	3	0½	1	Vir	8 32	2 22
220	7	W.	4 43	6 56	14 13	1 4	10	4	1¼	1¾	Lib	9 08	3 16
221	8	Th.	4 44	6 55	14 11	1 6	10	5	2	2½	Lib	9 45	4 09
222	9	Fr.	4 45	6 54	14 9	1 8	10	6	3	3½	Sco	10 25	5 03
223	10	Sa.	4 46	6 52	14 6	1 11	11	7	4	4½	Sco	11 07	5 57
224	11	S.	4 47	6 51	14 4	1 13	11	8	5	5½	Sgr	11 53	6 51
225	12	M.	4 48	6 50	14 2	1 15	11	9	6	6½	Sgr	morn	7 46
226	13	Tu.	4 49	6 48	13 59	1 18	11	10	7¼	7½	Cap	0 45	8 39
227	14	W.	4 50	6 47	13 57	1 20	11	11	8¼	8½	Cap	1 39	9 30
228	15	Th.	4 51	6 45	13 54	1 23	11	12	9¼	9½	Cap	2 36	10 20
229	16	Fr.	4 52	6 44	13 52	1 25	12	13	10	10¼	Aqr	3 35	11 08
230	17	Sa.	4 53	6 42	13 49	1 28	12	○	10¾	11	Aqr	rises	11 54
231	18	S.	4 54	6 41	13 47	1 30	12	15	11½	11¾	Psc	6 50	morn
232	19	M.	4 55	6 39	13 44	1 33	12	16	—	0	Psc	7 20	0 38
233	20	Tu.	4 56	6 38	13 42	1 35	13	17	0¼	0¾	Psc	7 48	1 21
234	21	W.	4 57	6 36	13 39	1 38	13	18	1	1¼	Ari	8 16	2 03
235	22	Th.	4 59	6 35	13 36	1 41	13	19	1½	2	Ari	8 45	2 46
236	23	Fr.	5 0	6 33	13 34	1 43	13	20	2¼	2½	Tau	9 17	3 29
237	24	Sa.	5 1	6 32	13 31	1 46	14	21	3	3¼	Tau	9 51	4 13
238	25	S.	5 2	6 30	13 28	1 49	14	22	3¾	4¼	Tau	10 30	4 59
239	26	M.	5 3	6 28	13 25	1 52	14	23	4¾	5	G'm	11 15	5 48
240	27	Tu.	5 4	6 27	13 23	1 54	14	24	5½	6	G'm	morn	6 38
241	28	W.	5 5	6 25	13 20	1 57	15	25	6½	6¾	Cnc	0 05	7 31
242	29	Th.	5 6	6 23	13 17	2 0	15	26	7½	7¾	Cnc	1 02	8 25
243	30	Fr.	5 7	6 22	13 15	2 2	15	27	8¼	8¾	Leo	2 06	9 21
244	31	Sa.	5 8	6 20	13 12	2 5	16	28	9¼	9½	Leo	3 14	10 17

AUGUST hath 31 days. [1940

He knew how Roman legions looked, for he
Had seen the Maine Coast fogs march in from sea
For many years now, in the August days.

ROBERT P. TRISTRAM COFFIN
"The Fog"

D.M.	D.W.	Aspects, Holidays, Heights of High Water, etc.	Farmer's Calendar.
1	Th.	Lammas Day. ☿ Stat. in R. A. Tides 8.6 10.2	**Old Home Reminiscences**
2	Fr.	♀ Gr. Brilliancy. ☌ ☿ ☾. 9.2 10.7 *Warm*	Some states and many communities are celebrating "Old Home Day" this month. This year mine will have to be a mental rather than a physical participation.
3	Sa.	Lafayette was introduced to Washington at Phila., 1777 Tides 9.7 11.1	
4	F	11th Sun. af. Tr. ☌ ☌ ☾. 10.2 11.3	
5	M.	☾ in Peri. Tides 10.6 *and Muggy*	
6	Tu.	Trans-figuration ☾ on Eq. ☌ ☿ ☾. □ ♃ ☉. □ ♄ ☉.	The "frog pond" comes to mind. There in the mud and among the lily pads I learned to swim. To be sure the English Channel has not been attempted and service medals even are lacking, but you have herewith the evidence that I got ashore when the improvised raft was broken completely in two. And there I learned to skate—again not in fancy lines and curves, nor even backward except by mistake. A pine grove I remember where an over-busy mother occasionally took time to accompany a very small group of children on a picnic. Finally, there was a cupola on our big barn. There most grown people and some children dared not go. The stairs had no risers and in some places no railing. The Flatiron and Woolworth buildings are much better appointed, but they lack something in thrill for me today that only memory can provide.
7	W.	U. S. and Eng. Comm. met at Ghent to ar. pc. tr., 1814 11.2 10.9 [6th 11.4 10.9	
8	Th.	First yacht race to regain the America's cup, 1870 Tides 10.8 10.8	
9	Fr.	Isaac Walton born, 1593, died 1683 Tides 10.3 10.6	
10	Sa.	St. Lawrence. ☿ Gr. el. W. ♀ Gr. Hel. Lat. S. 9.7 10.4	
11	F	12th Sun. af. Tr. Tides 9.2 10.1	
12	M.	General Sheridan buried in Washington, 1888 Tides 8.8 9.9	
13	Tu.	☾ runs low. Tides 8.6 9.9 *Showers*	
14	W.	Indian war in Florida ended, 1842 Tides 8.7 9.9	
15	Th.	☌ ♃ ♄. ☿ in ♌. Tides 8.8 10.0	
16	Fr.	Battle of Bennington, Americans under Stark defeated British, 1777 9.0 10.1	
17	Sa.	Murder of little princes in the Tower, 1483 Tides 9.2 10.1	
18	F	13th Sun. a. Cr. Tides 9.3 10.0 *Cooler*	
19	M.	□ ☊ ☉. Tides — 9.4	
20	Tu.	☿ in Perl. ☾ on Eq. Tides 9.8 9.4	
21	W.	☾ in Apogee. Tides 9.6 9.4 *Rain*	
22	Th.	Brit. Gen., Lord Howe, land. ten thousand men nr. Graves End, L. I., 1776 9.3 9.3	
23	Fr.	State of Franklin formed; afterwards named Tennessee, 1784 9.0 9.2	
24	Sa.	St. Bartholomew. ☌ ♄ ☾. ☌ ♃ ☾. 8.6 9.0	
25	F	14th S. a. T. ☌ ☊ ☾. ☌ in Aph. 8.3 8.9	
26	M.	First petroleum well opened at Titusville, Pennsylvania, 1856 8.0 8.9	
27	Tu.	♄ Stat. in R. A. ☾ runs high Tides 7.9 9.0	
28	W.	St. Augustine. Tides 8.0 9.3 *Fair and*	
29	Th.	☌ ♀ ☾. Tides 8.4 9.7 *Cool*	
30	Fr.	☌ ☌ ☉. ☿ Greatest Hel. Lat. N. Tides 8.9 10.3	
31	Sa.	John Bunyan died, 1688 Tides 9.6 10.8	

Old Home Day" this month. This year mine will have to be a mental rather than a physical participation.

The "frog pond" comes to mind. There in the mud and among the lily pads I learned to swim. To be sure the English Channel has not been attempted and service medals even are lacking, but you have herewith the evidence that I got ashore when the improvised raft was broken completely in two. And there I learned to skate—again not in fancy lines and curves, nor even backward except by mistake. A pine grove I remember where an over-busy mother occasionally took time to accompany a very small group of children on a picnic. Finally, there was a cupola on our big barn. There most grown people and some children dared not go. The stairs had no risers and in some places no railing. The Flatiron and Woolworth buildings are much better appointed, but they lack something in thrill for me today that only memory can provide.

Those were horse and buggy days on an isolated farm, nevertheless there were satisfactions. To go back and see that view and be alone in the quiet woods of that place would do me good, as well as to meet the friends of that locality, who are still numbered among the best to be had.

1940] SEPTEMBER, NINTH MONTH.

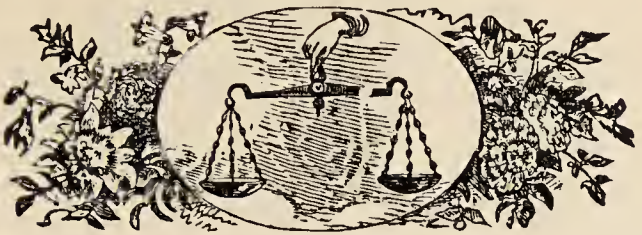
ASTRONOMICAL CALCULATIONS.

☉'s Declination.	Days.	d.	m.	Days.	d.	m.	Days.	d.	m.	Days.	d.	m.	Days.	d.	m.
	1	8N.	10	7	5	57	13	3	40	19	1	21	25	0	59
	2	7	48	8	5	34	14	3	17	20	0	58	26	1	22
	3	7	26	9	5	12	15	2	54	21	0	35	27	1	46
	4	7	04	10	4	49	16	2	31	22	0N.	12	28	2	09
	5	6	42	11	4	26	17	2	08	23	0S.	12	29	2	32
	6	6	19	12	4	03	18	1	45	24	0	35	30	2	56

● New Moon, 1st day, 11h. 15m., evening, W.
☽ First Quarter, 8th day, 2h. 32m., evening, E.
○ Full Moon, 16th day, 9h. 41., morning, W.
☾ Last Quarter, 24th day, 0h. 47m., evening, W.

Day of Year.	Day of Month.	Day of the Week.	☉ Rises. h.	m.	☉ Sets. h.	m.	Length of Days. h.	m.	Day's Decr. h.	m.	Sun Fast. m.	Moon's Age.	Full Sea, Boston. Morn h.	Even h.	☽'s Place	☽ Sets. h.	m.	☽ Souths. h.	m.
245	1	S.	5	9	6	18	13	9	2	8	16	●	10	10½	Vir	sets		11	13
246	2	M.	5	10	6	17	13	7	2	10	16	1	10¾	11¼	Vir	6	28	0	09
247	3	Tu.	5	11	6	15	13	4	2	13	17	2	11¾	—	Lib	7	06	1	04
248	4	W.	5	12	6	13	13	1	2	16	17	3	0	0½	Lib	7	43	2	00
249	5	Th.	5	13	6	12	12	59	2	18	17	4	1	1¼	Sco	8	23	2	55
250	6	Fr.	5	14	6	10	12	56	2	21	18	5	1¾	2¼	Sco	9	05	3	51
251	7	Sa.	5	15	6	8	12	53	2	24	18	6	2¾	3¼	Sgr	9	51	4	47
252	8	S.	5	17	6	7	12	50	2	27	18	7	3¾	4	Sgr	10	42	5	42
253	9	M.	5	18	6	5	12	47	2	30	19	8	4¾	5¼	Sgr	11	35	6	35
254	10	Tu.	5	19	6	3	12	44	2	33	19	9	5¾	6¼	Cap	morn		7	27
255	11	W.	5	20	6	1	12	41	2	36	19	10	7	7¼	Cap	0	32	8	17
256	12	Th.	5	21	5	59	12	38	2	39	20	11	8	8¼	Aqr	1	30	9	05
257	13	Fr.	5	22	5	58	12	36	2	41	20	12	8¾	9	Aqr	2	29	9	51
258	14	Sa.	5	23	5	56	12	33	2	44	20	13	9½	10	Psc	3	27	10	36
259	15	S.	5	24	5	54	12	30	2	47	21	14	10¼	10½	Psc	4	25	11	19
260	16	M.	5	25	5	52	12	27	2	50	21	○	11	11¼	Psc	rises		morn	
261	17	Tu.	5	26	5	51	12	25	2	52	21	16	11½	11¾	Ari	6	19	0	01
262	18	W.	5	27	5	49	12	22	2	55	22	17	—	0	Ari	6	48	0	44
263	19	Th.	5	28	5	47	12	19	2	58	22	18	0½	0¾	Tau	7	19	1	26
264	20	Fr.	5	29	5	45	12	16	3	1	22	19	1	1¼	Tau	7	52	2	10
265	21	Sa.	5	30	5	43	12	13	3	4	23	20	1¾	2	Tau	8	29	2	55
266	22	S.	5	31	5	42	12	11	3	6	23	21	2½	2¾	G'm	9	10	3	42
267	23	M.	5	32	5	40	12	8	3	9	23	22	3¼	3½	G'm	9	58	4	31
268	24	Tu.	5	34	5	38	12	4	3	13	24	23	4	4½	Cnc	10	50	5	22
269	25	W.	5	35	5	36	12	1	3	16	24	24	5	5¼	Cnc	11	49	6	14
270	26	Th.	5	36	5	35	11	59	3	18	24	25	6	6¼	Cnc	morn		7	07
271	27	Fr.	5	37	5	33	11	56	3	21	25	26	7	7¼	Leo	0	53	8	01
272	28	Sa.	5	38	5	31	11	53	3	24	25	27	7¾	8¼	Leo	2	02	8	56
273	29	S.	5	39	5	29	11	50	3	27	26	28	8¾	9¼	Vir	3	13	9	51
274	30	M.	5	40	5	28	11	48	3	29	26	29	9½	10	Vir	4	26	10	46

SEPTEMBER hath 30 days. [1940



Beautiful golden-rod!
Up from the half-burned sod,
When the August fires have died away
You rise, gold-tipped like the sun's last ray.
Born of the summer's afterglow,
Reaching heaven, though prisoned below:
Beautiful golden-rod!

ISABELL S. WARDELL
"Golden-Rod"

D.M.	D.W.	Aspects, Holidays, Heights of High Water, etc.
1	F	15th S.a.Tr. ☉ in ♎ Stat. ♂☿☾. {10.3 11.3
2	M.	Labor Day ♂♂☾.♂☿☌. {10.9 11.6 *Showers*
3	Tu.	♂♆☾.☾ in Peri. ☾ on Eq. Tides {11.3 —
4	W.	♂☿☉ Sup. ♅ Stat. in R. A. {11.6 11.6 *threaten*
5	Th.	Dog days end ♀ Greatest elong. W. Tides {11.4 11.5
6	Fr.	President McKinley shot, 1901 Tides {10.9 11.3
7	Sa.	J. L. Sullivan knocked out by J. J. Corbett in 21 rnds at New Orl., 1892 {10.3 10.9
8	F	16th S.a.Tr. Nativ. of Vir. Mary {9.6 10.4
9	M.	☾ runs low. Tides {9.1 9.9 *Fair and*
10	Tu.	Commodore Perry defeated the British under Barclay, 1813 Tides {8.7 9.6
11	W.	♂☿♆. Tides {8.6 9.5 *cool*
12	Th.	Indian mass. at Deerfield, Mass., 1675 {8.6 9.5 *Sunny days*
13	Fr.	Death of Gen. Wolfe at Quebec in hour of victory, 1759 Tides {8.8 9.6
14	Sa.	President McKinley died and Vice-President Roosevelt took office, 1901 {9.1 9.8
15	F	17th Sun. af. Trin. Tides {9.3 9.7
16	M.	☾ on Eq. Tides {9.5 9.7 *Cool nights*
17	Tu.	Col. G. A. Forsyth fought des. 8-day battle with Indians, in Kansas, 1868 {9.6 9.6
18	W.	☾ in Apogee. ♂♆☉. Tides {— 9.7
19	Th.	Battle of Chickamauga, Confed. victory, 1863 {9.5 9.7 *Northeast*
20	Fr.	♂♄☾.♂♅☾. Tides {9.3 9.6 *rain*
21	Sa.	Hurricane in N. E., 1938 St. Matthew. ♂♎☾. {9.0 9.4
22	F	18th S.a.T. ☿ in ♍. ☉ en. ♎. AUT. COM.
23	M.	Paul Jones' "Bonhomme Rich." def. "Serapis," 1779 {8.4 9.1 [22nd {8.7 9.8
24	Tu.	☾ runs high. Tides {8.2 9.1 *Few mild days*
25	W.	Balboa discovered the Pacific Ocean, 1513 {8.1 9.1 *Showers,*
26	Th.	British entered Philadel., 1777 {8.3 9.3 *crisp mornings*
27	Fr.	Remodeling of White House at Washington begun, 1804 {8.8 9.7 *Early*
28	Sa.	♂♀☾.♂♂♆. Tides {9.4 10.2 *frosts*
29	F	19th S.a.T. St. Mic. & All An. D.S. Ends {10.1 10.6
30	M.	St. Jerome. ☾ on E. ♂♆☾. ♂♂☾. {10.3 11.2

Farmer's Calendar.

The Land

"So far as I can see, most of the people living in New York have come here from the farm to try to make enough money to go back to the farm," said Don Marquis, that great philosopher and friend of The Old Soak.

What method of living affords so many checks and balances as contact with the soil? What triumph in life's progress surpasses a June rose garden, an orchard in fruit, or a grain field ready to harvest? And, where is found so true a sense of values as among outdoor men, whether on the range, in the forest, or in the garden? These earth-workers are likely to realize that the laws of nature are not subject to change with or without notice; that the copy-book maxims contain much of the crystallized wisdom of the human race acquired in pastoral pursuits; and that there is little warrant for the superficial political conception in this "age of plenty" that life has ceased to be a struggle to become a toboggan slide.

S. A. Everitt

ASTRONOMICAL CALCULATIONS.

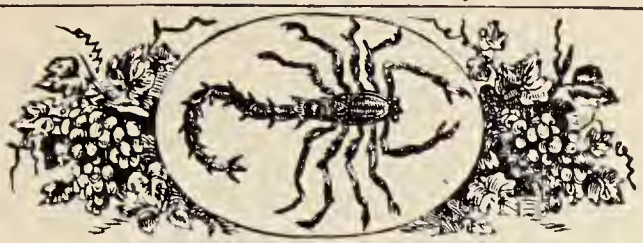
☉'s Declination.

Days.	d. m.	Days.	d. m.	Days.	d. m.	Days.	d. m.	Days.	d. m.
1	3s. 19	7	5 38	13	7 54	19	10 06	25	12 13
2	3 42	8	6 01	14	8 16	20	10 28	26	12 33
3	3 05	9	6 23	15	8 38	21	10 49	27	12 54
4	4 28	10	6 46	16	9 00	22	11 10	28	13 14
5	4 52	11	7 09	17	9 23	23	11 31	29	13 34
6	5 15	12	7 31	18	9 44	24	12 02	30	13 54

● New Moon, 1st day, 7h. 41m., morning, E.
☽ First Quarter, 8th day, 1h. 18m., morning, W.
○ Full Moon, 16th day, 3h. 15m., morning, W.
☾ Last Quarter, 24th day, 1h. 4m., morning, E.
● New Moon, 30th day, 5h. 3m., evening, W.

Day of Year.	Day of Month.	Day of the Week.	☉ Rises. h. m.	☉ Sets. h. m.	Length of Days. h. m.	Day's Decr. h. m.	Sun Fast. m.	Moon's Age.	Full Sea, Boston. Morn h.	Full Sea, Boston. Even h.	☽'s Place	☽ Sets. h. m.	☽ Souths. h. m.
275	1	Tu.	5 41	5 26	11 45	3 32	26	●	10½	11	Lib	sets	11 43
276	2	W.	5 42	5 24	11 42	3 35	26	1	11¼	11¾	Lib	6 15	0 40
277	3	Th.	5 43	5 22	11 39	3 38	27	2	—	0¼	Sco	6 58	1 37
278	4	Fr.	5 45	5 21	11 36	3 41	27	3	0¾	1	Sco	7 44	2 35
279	5	Sa.	5 46	5 19	11 33	3 44	27	4	1½	1¾	Sgr	8 35	3 32
280	6	S.	5 47	5 17	11 30	3 47	28	5	2½	2¾	Sgr	9 28	4 29
281	7	M.	5 48	5 16	11 28	3 49	28	6	3½	3¾	Cap	10 26	5 23
282	8	Tu.	5 49	5 14	11 25	3 52	28	7	4½	4¾	Cap	11 24	6 14
283	9	W.	5 50	5 12	11 22	3 55	29	8	5½	5¾	Aqr	morn	7 03
284	10	Th.	5 51	5 11	11 20	3 57	29	9	6½	6¾	Aqr	0 23	7 49
285	11	Fr.	5 52	5 9	11 17	4 0	29	10	7½	7¾	Aqr	1 21	8 34
286	12	Sa.	5 54	5 8	11 14	4 3	29	11	8¼	8¾	Psc	2 19	9 17
287	13	S.	5 55	5 6	11 11	4 6	30	12	9	9½	Psc	3 16	10 00
288	14	M.	5 56	5 4	11 8	4 9	30	13	9¾	10	Ari	4 13	10 42
289	15	Tu.	5 57	5 2	11 5	4 12	30	14	10½	10¾	Ari	5 09	11 25
290	16	W.	5 58	5 1	11 3	4 14	30	○	11	11½	Ari	rises	morn
291	17	Th.	5 59	4 59	11 0	4 17	30	16	11½	—	Tau	5 53	0 08
292	18	Fr.	6 1	4 58	10 57	4 20	31	17	0	0¼	Tau	6 29	0 53
293	19	Sa.	6 2	4 56	10 54	4 23	31	18	0¾	0¾	G'm	7 09	1 40
294	20	S.	6 3	4 55	10 52	4 25	31	19	1¼	1½	G'm	7 54	2 28
295	21	M.	6 4	4 53	10 49	4 28	31	20	2	2¼	G'm	8 44	3 17
296	22	Tu.	6 5	4 52	10 47	4 30	31	21	2¾	3	Cnc	9 39	4 08
297	23	W.	6 6	4 50	10 44	4 33	31	22	3¾	4	Cnc	10 39	4 59
298	24	Th.	6 8	4 49	10 41	4 36	32	23	4½	4¾	Leo	11 43	5 51
299	25	Fr.	6 9	4 47	10 38	4 39	32	24	5½	5¾	Leo	morn	6 44
300	26	Sa.	6 10	4 46	10 36	4 41	32	25	6½	6¾	Vir	0 51	7 37
301	27	S.	6 11	4 44	10 33	4 44	32	26	7½	7¾	Vir	2 01	8 30
302	28	M.	6 13	4 43	10 30	4 47	32	27	8¼	8¾	Lib	3 14	9 25
303	29	Tu.	6 14	4 42	10 28	4 49	32	28	9¼	9¾	Lib	4 27	10 20
304	30	W.	6 15	4 40	10 25	4 52	32	●	10	10½	Sco	sets	11 18
305	31	Th.	6 16	4 39	10 23	4 54	32	1	11	11½	Sco	5 31	0 16

OCTOBER hath 31 days. [1940



A vast content
Is on the land, and, look, above the line
Of warder hills a new-born splendor shines,
To turn the dun warm gold, — low-hung and large,
The mellow magic of October's moon.

RICHARD BURTON
"Conflict Before Victory"

D.M.	D.W.	Aspects, Holidays, Heights of High Water, etc.	Farmer's Calendar.
1	Tu.	☾ in Perigee. ☉ Tot. eclipse, (inv. in N.E.) Tides 11.4 / 11.4	**Fall Plowing**
2	W.	♂ ☿ ☾. Tides 11.8 / 11.4 *Fair, Cool*	For the farmer of many acres, fall plowing is often important from the standpoint of labor distribution. There is more time than in the spring, the weather and soil conditions are more propitious, and the horses are "in the harness" or the tractor is waiting in the field.
3	Th.	☿ in Aphelion. Tides — / 12.0	
4	Fr.	Paul Jones ent. Texal, Holland, and cap. British frigate "Serapis," 1779 11.2 / 11.8	
5	Sa.	♀ in ♌ Tides 10.7 / 11.4 *Frosts*	
6	F	20th S. a. Tr. ☾ runs low. Tides 10.2 / 10.9	
7	M.	King Wm. granted new charter to Mass., 1691 9.6 / 10.2 *Warmer,*	
8	Tu.	First boat to pass through the Erie Canal, Rochester to Albany, 1823 9.0 / 9.7	
9	W.	St. Denis. Tides 8.7 / 9.3 *Showers*	
10	Th.	Abraham Lincoln chal. Stephen A. Douglas to debate, 1854 8.6 / 9.1	
11	Fr.	♂ ☌ ♄. Tides 8.7 / 9.0 *Fall rains*	
12	Sa.	Columbus Day. Tides 8.9 / 9.1	
13	F	21st S. af. Trin. ☾ on Eq. Tides 9.1 / 9.2	
14	M.	Parade in hon. of Adm. Dewey's vic. at Man. Bay took pl. in Boston, 1899 9.4 / 9.3	
15	Tu.	☾ in Apogee. 9.6 / 9.3 *Warm days*	
16	W.	First demonstration of ether made in Boston hospital, 1846 Tides 9.7 / 9.3	
17	Th.	♂ ☌ ☾. ♂ ♄ ☾. 9.9 / — *like Indian*	
18	Fr.	St. Luke. ♂ ☉ ☾. Tides 9.2 / 9.9 *Summer*	
19	Sa.	Cornwallis surrendered at Yorktown, 1781 Tides 9.1 / 9.8	
20	F	22nd S. af. Tri. ☿ Gr. Elong. E. 8.9 / 9.7	
21	M.	☾ runs high Tides 8.7 / 9.6 *Cool and*	
22	Tu.	Tides 8.5 / 9.4 *rainy*	
23	W.	☿ Gr. Hel. Lat. S. Tides 8.4 / 9.3	
24	Th.	Death of Daniel Webster, 1854 Tides 8.5 / 9.3 *Snow in*	
25	Fr.	St. Crispin. Tides 8.8 / 9.4 *mountains*	
26	Sa.	Provincial Congress took steps to organize "Minutemen", 1774 9.2 / 9.7	
27	F	23d S. a. T. ♂ ♀ ☾. 9.8 / 10.0 *Fair and*	
28	M.	St. Simon & St. Jude. ☾ on Eq. ♂ ♆ ☾. 10.5 / 10.4	
29	Tu.	☾ in Per. ♂ ☌ ☾. ♂ ♀ ♆. 11.2 / 10.8 *mild*	
30	W.	Gen Sherman laid cor'stne, Soldiers' & Sailors' Mem. Arch, Bklyn., 1889 11.7 / 11.0	
31	Th.	All Hallows Eve. ♂ ☿ ☾. 12.0 / 10.9 *Colder*	

M. Gale Eastman

1940] NOVEMBER, ELEVENTH MONTH.

ASTRONOMICAL CALCULATIONS.

☉'s Declination.	Days.	d. m.	Days.	d. m.	Days.	d. m.	Days.	d. m.	Days.	d. m.
	1	14s. 32	7	16 23	13	18 03	19	19 33	25	20 49
	2	14 51	8	16 40	14	18 19	20	19 46	26	21 00
	3	15 10	9	16 58	15	18 35	21	20 00	27	21 12
	4	15 29	10	17 14	16	18 49	22	20 12	28	21 22
	5	15 47	11	17 31	17	19 04	23	20 25	29	21 32
	6	16 05	12	17 47	18	19 18	24	20 37	30	21 42

☽ First Quarter, 6th day, 4h. 8m., evening, E.
○ Full Moon, 14th day, 9h. 23m., evening, E.
☾ Last Quarter, 22nd day, 11h. 36m., morning, W.
● New Moon, 29th day, 3h. 42m., morning, E.

Day of Year.	Day of Month.	Day of the Week.	☉ Rises. h. m.	☉ Sets. h. m.	Length of Days. h. m.	Day's Decr. h. m.	Sun Fast. m.	Moon's Age.	Full Sea. Boston. Morn h.	Full Sea. Boston. Even h.	☽'s Place	☽ Sets. h. m.	☽ Souths. h. m.
306	1	Fr.	6 18	4 38	10 20	4 57	32	2	11¾	—	Sgr	6 21	1 16
307	2	Sa.	6 19	4 36	10 17	5 0	32	3	0¼	0¾	Sgr	7 15	2 14
308	3	♑	6 20	4 35	10 15	5 2	32	4	1¼	1½	Cap	8 13	3 11
309	4	M.	6 21	4 34	10 13	5 4	32	5	2	2½	Cap	9 12	4 06
310	5	Tu.	6 23	4 33	10 11	5 6	32	6	3	3¼	Cap	10 12	4 57
311	6	W.	6 24	4 32	10 8	5 9	32	7	4	4¼	Aqr	11 12	5 46
312	7	Th.	6 25	4 30	10 5	5 12	32	8	5	5¼	Aqr	morn	6 31
313	8	Fr.	6 26	4 29	10 3	5 14	32	9	6	6¼	Psc	0 11	7 15
314	9	Sa.	6 28	4 28	10 0	5 17	32	10	6¾	7¼	Psc	1 09	7 58
315	10	♑	6 29	4 27	9 58	5 19	32	11	7¾	8	Ari	2 06	2 40
316	11	M.	6 30	4 26	9 56	5 21	32	12	8½	8¾	Ari	3 02	9 23
317	12	Tu.	6 31	4 25	9 54	5 23	32	13	9¼	9½	Ari	3 59	10 06
318	13	W.	6 33	4 24	9 51	5 26	31	14	9¾	10¼	Tau	4 56	10 51
319	14	Th.	6 34	4 23	9 49	5 28	31	○	10½	11	Tau	rises	11 37
320	15	Fr.	6 35	4 22	9 47	5 30	31	16	11	11½	G'm	5 08	morn
321	16	Sa.	6 36	4 21	9 45	5 32	31	17	11¾	—	G'm	5 52	0 25
322	17	♑	6 38	4 21	9 43	5 34	31	18	0¼	0½	G'm	6 40	1 14
323	18	M.	6 39	4 20	9 41	5 36	30	19	1	1	Cnc	7 33	2 05
324	19	Tu.	6 40	4 19	9 39	5 38	30	20	1¾	1¾	Cnc	8 31	2 56
325	20	W.	6 41	4 18	9 37	5 40	30	21	2½	2½	Leo	9 34	3 48
326	21	Th.	6 43	4 18	9 35	5 42	30	22	3¼	3½	Leo	10 38	4 39
327	22	Fr.	6 44	4 17	9 33	5 44	30	23	4¼	4½	Vir	11 46	5 40
328	23	Sa.	6 45	4 16	9 31	5 46	29	24	5	5½	Vir	morn	6 22
329	24	♑	6 46	4 16	9 30	5 47	29	25	6	6½	Vir	0 55	7 13
330	25	M.	6 47	4 15	9 28	5 49	29	26	7	7½	Lib	2 05	8 06
331	26	Tu.	6 48	4 15	9 27	5 50	28	27	8	8½	Lib	3 17	9 01
332	27	W.	6 49	4 14	9 25	5 52	28	28	8¾	9½	Sco	4 30	9 57
333	28	Th.	6 50	4 13	9 23	5 54	28	29	9¾	10¼	Sco	5 42	10 56
334	29	Fr.	6 51	4 13	9 22	5 55	27	●	10½	11¼	Sgr	sets	11 55
335	30	Sa.	6 52	4 13	9 21	5 56	27	1	11½	—	Sgr	5 54	0 54

NOVEMBER hath 30 days. [1940

Come uncles and cousins, come nieces and aunts,
Come nephews and brothers, no won'ts and no can'ts;
Put business and shopping and schoolbooks away,
The year has rolled round, — it is Thanksgiving Day.

J. S. BARRY
"Thanksgiving Song"

D. M.	D. W.	Aspects, Holidays, Heights of High Water, etc.	Farmer's Calendar.
1	Fr.	All Saints Day ☿ Stationary in R.A. Tides {12.0 —}	**Mulching**
2	Sa.	☽ ☌ ☉. Tides {10.7 11.8} *Cold*	Mulching plants in the home garden is an invaluable aid in protecting them from freezing during the winter. Perhaps November is the best time to do this. The mulch may consist of some of the newer materials such as glass wool or peat moss, both of which are very excellent mulch, but rather expensive; or pine needles, hay, straw, or even pine limbs to cover tulips and narcissus beds to prevent heaving. Certainly the strawberry grower cannot afford to leave his bed unmulched. Many strawberry growers use pine needles to cover the strawberry plants, while others use a marsh hay which is comparatively free from weed seeds. In the flower garden all materials which carry weed seeds should be avoided and materials like peat or glass wool mulch are preferable to hay or straw. Do not put this mulch on too thick. Usually an inch or an inch and a half is sufficient to protect the plants underneath. Forest leaves are not ordinarily recommended. They mat down so tightly that they keep out air and sometimes smother plants like hollyhocks.
3	F	24th ☽ a. ♑. ☽ ♄ ☉. ☾ runs low. Tides {10.4 11.3}	
4	M.	Gen. St. Claire routed by Indians on the Wabash River, 1790 Tides {9.9 10.7}	
5	Tu.	Discovery of Gunpowder Plot, 1605 Tides {9.4 10.0} *Few*	
6	W.	Block Island incor. as a town, 1672 Tides {9.0 9.4} *warm*	
7	Th.	Capt. and cr. of U. S. S. "Virginius" exec. by Span. Santiago, Cuba, 1873 {8.7 9.0}	
8	Fr.	☿ in Perihelion. Tides {8.6 8.7} *days*	
9	Sa.	Begin. of the great Boston fire, 1872 Tides {8.7 8.6}	
10	F	25th ☽. a. ♑. ☾on Eq. Tides {8.8 8.6}	
11	M.	St. Martin. Armistice Day. ☾ Apo. ☿ in ♌. ☿ Tr. of.	
12	Tu.	Tides {9.3 8.7} [11th ☌ ☿ ☉ Inf. {9.1 8.6}	
13	W.	☌ ☽ ☾. ☌ ♄ ☾. Tides {9.6 8.8} *Cool*	
14	Th.	☌ ♁ ☾. Tides {9.8 8.9}	
15	Fr.	Brazil procl. a republic by bloodless revolution, 1889 Tides {9.9 9.0}	
16	Sa.	☿ in Perih. ☽ ♁ ☉. Tides {10.0 —}	
17	F	26th ♌. a. ♑. ☾ runs high Tides {8.9 10.0}	
18	M.	Battleship Maine launched at Brooklyn Navy Yard, New York, 1890 {8.9 10.0}	
19	Tu.	Nat. Soldiers' Cemetery at Gettysburg dedicated, 1863 {8.8 9.9} *Warm-*	
20	W.	☿ Stationary in R.A. {8.8 9.7} *er with showers*	
21	Th.	Thanksgiving Day (?) Tides {8.8 9.6}	
22	Fr.	St. Cecilia. Tides {9.0 9.4} *Clear, cold,*	
23	Sa.	Doctor Parkeman killed by Professor Webster of Harvard, 1849 {9.2 9.4}	
24	F	27th ♌. a. ♑. ♂♆☾. ☾ on Eq. {9.6 9.5}	
25	M.	St. Catharine. Tides {10.1 9.7} *ice*	
26	Tu.	☿ Gr. Hel. Lat. N. ☌ ☿ ☾. ☌ ♂ ☾. Tides {10.6 9.9}	
27	W.	☌ ☿ ☾. ☾ in Per. Tides {11.1 10.1} *Colder with*	
28	Th.	1st Amer. P.O. in N.Y., 1783 ☿ Gr. El. W. {11.5 10.8} *snow &*	
29	Fr.	Gen. A. Jackson def. Creek Ind., Autosse, Ala., 1814 {11.7 10.8} *sleet*	
30	Sa.	St. Andrew. ☿ Gr. Hel. Lat. N. ☾ runs low {11.7 —}	

J. R. Hepler

1940] DECEMBER, TWELFTH MONTH.

ASTRONOMICAL CALCULATIONS.

☉'s Declination.	Days.	d. m.	Days.	d. m.	Days.	d. m.	Days.	d. m.	Days.	d. m.
	1	21s. 52	7	22 39	13	23 11	19	23 25	25	23 23
	2	22 01	8	22 45	14	23 14	20	23 26	26	23 21
	3	22 09	9	22 51	15	23 17	21	23 27	27	23 19
	4	22 17	10	22 57	16	23 20	22	23 26	28	23 16
	5	22 25	11	23 02	17	23 22	23	23 26	29	23 13
	6	22 32	12	23 06	18	23 24	24	23 25	30	23 09

☽ First Quarter, 6th day, 11h. 1m., morning, E.
○ Full Moon, 14th day, 2h. 38m., evening, E.
☾ Last Quarter, 21st day, 8h. 45m., evening, E.
● New Moon, 28th day, 3h. 56m., evening, W.

Day of Year.	Day of Month.	Day of the Week.	☉ Rises. h. m.	☉ Sets. h. m.	Length of Days. h. m.	Day's Decr. h. m.	Sun Fast. m.	Moon's Age.	Full Sea, Boston. Morn h.	Full Sea, Boston. Even h.	☽'s Place	☽ Sets. h. m.	☽ Sonths. h. m.
336	1	S.	6 53	4 13	9 20	5 57	27	2	0	0¼	Cap	6 54	1 51
337	2	M.	6 54	4 13	9 19	5 58	26	3	1	1¼	Cap	7 56	2 46
338	3	Tu.	6 56	4 13	9 17	6 0	26	4	1¾	2	Aqr	8 58	3 37
339	4	W.	6 57	4 12	9 15	6 2	25	5	2½	2¾	Aqr	9 59	4 25
340	5	Th.	6 58	4 12	9 14	6 3	25	6	3½	3¾	Psc	10 59	5 11
341	6	Fr.	6 59	4 12	9 13	6 4	25	7	4¼	4¾	Psc	11 56	5 54
342	7	Sa.	7 0	4 12	9 12	6 5	24	8	5¼	5½	Psc	morn	6 37
343	8	S.	7 1	4 12	9 11	6 6	24	9	6¼	6½	Ari	0 52	7 19
344	9	M.	7 2	4 12	9 10	6 7	23	10	7	7¼	Ari	1 50	8 02
345	10	Tu.	7 3	4 12	9 9	6 8	23	11	7¾	8¼	Tau	2 47	8 46
346	11	W.	7 3	4 12	9 9	6 8	22	12	8½	9	Tau	3 44	9 32
347	12	Th.	7 4	4 12	9 8	6 9	22	13	9¼	9¾	Tau	4 41	10 19
348	13	Fr.	7 5	4 12	9 7	6 10	21	14	10	10½	G'm	5 38	11 09
349	14	Sa.	7 6	4 12	9 6	6 11	21	○	10½	11¼	G'm	rises	0 00
350	15	S.	7 7	4 13	9 6	6 11	20	16	11¼	11¾	Cnc	5 27	morn
351	16	M.	7 7	4 13	9 6	6 11	20	17	0	—	Cnc	6 24	0 52
352	17	Tu.	7 8	4 13	9 5	6 12	19	18	0½	0¾	Leo	7 27	1 44
353	18	W.	7 8	4 13	9 5	6 12	19	19	1¼	1½	Leo	8 31	2 36
354	19	Th.	7 9	4 14	9 5	6 12	18	20	2	2¼	Leo	9 38	3 28
355	20	Fr.	7 9	4 14	9 5	6 12	18	21	2¾	3¼	Vir	10 45	4 19
356	21	Sa.	7 10	4 15	9 5	incr	17	22	3¾	4	Vir	11 53	5 10
357	22	S.	7 10	4 15	9 5	0 0	17	23	4¾	5	Lib	morn	6 01
358	23	M.	7 11	4 16	9 5	0 0	16	24	5½	6	Lib	1 02	6 53
359	24	Tu.	7 11	4 16	9 5	0 0	16	25	6½	7	Sco	2 12	7 47
360	25	W.	7 12	4 17	9 5	0 0	15	26	7½	8¼	Sco	3 22	8 42
361	26	Th.	7 12	4 18	9 6	0 1	15	27	8½	9	Sgr	4 31	9 39
362	27	Fr.	7 13	4 19	9 6	0 1	14	28	9½	10	Sgr	5 35	10 37
363	28	Sa.	7 13	4 19	9 6	0 1	14	●	10¼	11	Cap	sets	11 35
364	29	S.	7 13	4 20	9 7	0 2	14	1	11¼	11¾	Cap	5 37	0 31
365	30	M.	7 13	4 20	9 7	0 2	13	2	0	—	Aqr	6 40	1 25
366	31	Tu.	7 14	4 21	9 7	0 2	13	3	0½	0¾	Aqr	7 42	2 15

DECEMBER hath 31 days. [1940

Two thousand times of snow declare
That on the Christmas of the year
There is a singing in the air;
And all who listen for it hear
A fairy chime, a seraph strain,
Telling He is born again,
— That all we love is born again.

JAMES STEPHENS
"Christmas in Freelands"

D.M.	D.W.	Aspects, Holidays, Heights of High Water, etc.	Farmer's Calendar.
1	F	1st S. in Ad. Tides 10.2 11.4 *Blustering*	**A Bee's Winter Home**
2	M.	☌☿☍. Tides 9.9 11.0 *northerly winds*	Now is the time to put the honey bee to bed. It must be remembered that honey bees do not hibernate, that their minimum body temperature must never be under 45° or else they will freeze to death. When the outside temperature drops to 57° they form a cluster in the hive and keep their body temperature up by exercising. In other words, they burn honey into heat and keep warm in this way. Now, it stands to reason that helping them to keep warm during the extremely cold days will enable them better to stand the cold days of winter. Putting them in a mouse-proof packing box with free access to the air by means of a specially built tunnel, and completely surrounded with three or four inches of shavings or cork, will serve the purpose. Beekeepers who winter their bees in cellars, prefer a dry, dark, unheated and mouse-free cellar with a temperature around 40° to 45° to keep the bees quiet. If wintered outdoors without protection the bees should be kept in a wind-free, sunny location.
3	Tu.	Electric street lights introduced in Philadelphia, 1881 Tides 9.6 10.4	
4	W.	Washington's Farewell Address delivered, 1782 Tides 9.3 9.8	
5	Th.	Fire Bklyn theater killed 295, Kate Claxton pl. "The Two Orphans," 1876 Tides 9.0 9.2	
6	Fr.	St. Nicholas. Tides 8.7 8.7 *Snow*	
7	Sa.	☾ on Eq. Tides 8.6 8.3 *flurries*	
8	F	2d S. in Ad. Shortest afternoon (Boston) 8.6 8.1	
9	M.	☾ in Apogee. Tides 8.7 8.1	
10	Tu.	☌♃☾. Tides 8.9 8.1	
11	W.	☌♄☾. Tides 9.1 8.3 *Fair and cold*	
12	Th.	☌☉☾. Tides 9.4 8.4	
13	Fr.	Battle of Fredericksburg, Lee vs. Burnside, Fed at. repulsed, 1862 9.7 8.6	
14	Sa.	Death of George Washington, 1799 Tides 9.9 8.7 *Rain,*	
15	F	3d Sun. in Ad. ☾ runs high. Tides 10.1 8.9	
16	M.	Boston Tea Party, 1773 Tides 10.2 — *sleet*	
17	Tu.	Cleveland sent to Congress his mem. mes. on Venezuela, 1895 9.0 10.3	
18	W.	Remains of George Washington deposited in family vault Mt. Vernon, 1799 9.1 10.2	
19	Th.	□♆⊙. ☿ in ♑. Tides 9.2 10.0 *Cold*	
20	Fr.	Washington, D. C., was founded, 1790 Tides 9.3 9.8 *wave*	
21	Sa.	St. Thomas. ☾ on Eq. ☌♆☾. ⊙ en. ♑, WIN. BEG.	
22	F	4th S. in Ad. Tides 9.7 9.3 [21st 9.5 9.5	
23	M.	Savannah, Ga., was occupied by General Sherman, 1864 Tides 9.9 9.2	
24	Tu.	Last horse car operated in Boston, 1900 Tides 10.2 9.2	
25	W.	Christmas. ☾ in Per. ☌♂☾. 10.5 9.3	
26	Th.	St. Stephen. ☌☿☾. 10.8 9.4 *Warmer*	
27	Fr.	St. John, Evangelist. Tides 11.0 9.6	
28	Sa.	Holy Innocents. ☾ runs low. ☌☿☾. 11.1 9.7	
29	F	1st S. a. Christmas. 11.1 9.7 *Cold,*	
30	M.	☿ in Aph. ♆ in Stat. R.A. Tides 10.9 — *Much*	
31	Tu.	♃ Stat. in R.A. Tides 9.6 10.6 *snow*	

J. R. Hepler

ECLIPSES FOR THE YEAR 1940

In the year 1940 there will be two Eclipses, both of the Sun.

I. *An Annular Eclipse of the Sun*, April 7, 1940, visible in New England as a partial eclipse. Visible as an annular eclipse within a band about 50 to 100 miles wide which extends across the eastern Pacific Ocean, Lower California, nortbern Mexico, the States which border on tbe Gulf of Mexico, and tbe western Atlantic Ocean; and as a partial eclipse over a large part of tbe Pacific Ocean, Nortb America except the nortbwestern part, southern Greenland, Central America, the northern part of South America, and the western part of tbe Atlantic Ocean. Tbe Eclipse begins at a point in tbe South Pacific Ocean about 2,000 miles south of Honolulu, in longitude 167° 46′ west of Greenwich, latitude 8° 39′ south; and ends at a point in the Atlantic Ocean about 1200 miles east of Jacksonville, in longitude 77° 19′ west of Greenwich, latitude 24° 37′ north. The greatest duration of the annular phase will be 7 minutes, 31 seconds. At Boston and vicinity, the partial Eclipse will begin at 3:53 P.M. and will end at 6:09 P.M., Eastern standard time. The greatest fraction of the Sun's diameter whicb will be obscured here will be 0.63.

II. *A Total Eclipse of the Sun*, October 1, 1940, invisible in New England. Visible as a total eclipse within a band about 100 miles wide wbicb extends across Colombia, Brazil, the Soutb Atlantic Ocean, and southern South Africa; and as a partial eclipse in Florida, the West Indies, southern Central America, South America except the soutbernmost part, tbe Atlantic Ocean, southern Africa, and Madagascar. Tbe Eclipse begins in Venezuela, in longitude 64° 10′ west of Greenwich, latitude 7° 58′ north, and ends at a point about 400 miles off the east coast of Soutb Africa, in longitude 39° 21′ east of Greenwicb, latitude 27° 20′ soutb. The greatest duration of tbe total phase is 5 minutes, 35 seconds.

TRANSIT OF MERCURY, 1940

A transit of the planet Mercury over the disk of the Sun will occur on November 11, 1940. It will be partly visible in New England, the Sun setting witb Mercury on its disk. First contact will occur at 3:49, Eastern standard time; and last contact 5 hours, 5 minutes later. Tbe least apparent distance between the centers of Mercury and the Sun will be 6′ 8″. Mercury will pass north of tbe Sun's center.

EARTH IN PERIHELION AND APHELION, 1940

The Eartb will be in Perihelion on January 2, 1940, at 1 A.M., distant from tbe Sun 91,316,000 miles. The Earth will be in Apbelion on July 4, 1940, at 5 A.M., distant from the Sun 94,429,000 miles.

MORNING AND EVENING STARS, 1940

(A planet is called Morning Star when it is above the horizon at sunrise, and Evening Star when it is above the horizon at sunset. More precisely, it is a Morning Star when less than 180° west of the Sun in right ascension and Evening Star when less than 180° east. When the planet is near conjunction or opposition, the distinction is unimportant.)

Mercury will be favorably situated for being seen as an Evening Star about February 28, June 24, and October 20, on which dates it sets 1h 34m, 1h 35m, and 0h 48m, respectively, after sunset; and as a Morning Star about April 12, August 10, and November 28, on which dates it rises 0h 50m, 1h 32m, and 1h 47m, respectively, before sunrise.

Venus will be Evening Star until June 26, and then Morning Star the rest of the year.

Mars will be Evening Star until August 30, and then Morning Star the rest of the year.

Jupiter will be Evening Star until April 11, then Morning Star until November 2, and then Evening Star the rest of the year.

Saturn will be Evening Star until April 24, then Morning Star until November 3, and then Evening Star the rest of the year.

THE SEASONS, 1940

Winter begins	1939, December	22,	1h. 6m.	P. M.	— Sun enters	Capricornus,	♑
Spring	" 1940, March	20,	1h.24m.	P. M.	— " "	Aries,	♈
Summer	" 1940, June	21,	8h.37m.	A. M.	— " "	Cancer,	♋
Autumn	" 1940, September	22,	11h.46m.	P. M.	— " "	Libra,	♎
Winter	" 1940, December	21,	6h.55m.	P. M.	— " "	Capricornus,	♑
Spring	" 1941, March	20,	7h.21m.	P. M.	— " "	Aries	♈

Length of Winter,	1939–1940,	89	days,	0	hours,	18	minutes.
" " Spring,	1940	92	"	19	"	13	"
" " Summer,	1940	93	"	15	"	9	"
" " Autumn,	1940	89	"	19	"	9	"
" " Winter,	1940–1941,	89	"	0	"	26	"

GLOSSARY OF ASTRONOMICAL TERMS

used in the OLD FARMER'S ALMANAC

Aphelion. Point farthest from the Sun.

Apogee. Point farthest from the Earth.

Aspect. Relative apparent position in the sky (used principally with reference to the planets, the Sun, and the Moon).

Comet. A celestial body of diffuse, hazy appearance, which revolves in an orbit around the Sun. A fully developed comet consists of (1) a small, bright nucleus, surrounded by (2) a misty envelope called the coma, which extends on the side opposite the Sun into (3) a luminous tail; but in many comets the nucleus, or tail, or both, are lacking. Most known comets have been visible in the telescope only, but some have been visible to the naked eye and a few were spectacularly brilliant. Their orbits, unlike those of the planets, are mostly of high eccentricity and are inclined at the greatest possible variety of angles to the plane of the ecliptic. Many comets have orbits which, as nearly as can be determined, are parabolic; these comets approach the Sun from vast distances beyond the farthest planet, sweep once around the Sun, and recede into the depths of space. Their appearance in the heavens is of course impossible to predict. Others, moving in elliptic orbits, pass perihelion at regular intervals and can be predicted long in advance.

Conjunction. The same right ascension or celestial longitude. Used with reference to any two heavenly bodies, as the planets, the Sun and the Moon.

Conjunction, inferior. The conjunction of the planet Mercury or the planet Venus with the Sun is said to be inferior when the planet is between the Earth and the Sun.

Conjunction, superior. The conjunction of Mercury or Venus is said to be superior when the Sun is between the Earth and the planet.

Day's Increase (or decrease). This quantity, tabulated in the Almanac, is the difference between the length of the day in question and that of the shortest (or longest) day of the year.

Declination. Apparent distance north or south of the celestial equator. The Sun's declination, in degrees and minutes, is tabulated at the top of the left-hand pages.

Dip of the horizon. The depression of the apparent, or sea horizon below the true, or astronomical, horizon. The dip increases with the observer's height above sea-level.

Dominical Letter. The Sunday letter. The letters A, B, C, D, E, F, G being applied to the first seven days of any common year, the dominical letter for that year is the letter thus pertaining to the first Sunday. The intercalation of an extra day in Leap year shifts the dominical letter, for the part of the year which follows February 29, one place backward.

Eccentricity. As applied to the orbit of a comet or planet, this term signifies the ratio of the Sun's distance from the center of the orbit to the mean of the perihelion and aphelion distances. It is a measure of the non-circularity of the orbit.

Eclipse. The darkening of one heavenly body by another. The Almanac mentions (1) eclipses of the Sun, in which the Moon passes between the Sun and the observer, and (2) eclipses of the Moon, in which the Moon enters the shadow of the Earth. An eclipse may be partial or total according as the body is partly or wholly obscured; or an eclipse of the Sun may be annular, in which case the Moon, though it becomes centered on the disk of the Sun, is so far from the Earth that its apparent diameter is less than the Sun's, so that a ring, or annulus, of sunlight shows around the Moon. By far the most interesting eclipses, and also, for any given locality, the rarest, are total eclipses of the Sun.

Ecliptic. The apparent annual path of the Sun among the stars; or, the great circle which is the intersection of the celestial sphere with the plane of the Earth's orbit. It intersects the celestial equator at an angle of 23½°, at the *equinoxes.*

Elongation. Apparent distance from the Sun. The planets Mercury and Venus, in their orbital motion, appear to oscillate from one side of the Sun to the other and back. The times of their greatest elongations are given in the Almanac.

Epact. The age of the "calendar Moon" at the beginning of the year. The calendar Moon is a fictitious Moon used in determining the date of Easter, made purposely to differ from the real Moon so that Easter may not coincide with the Jewish Passover. Easter is defined as the first Sunday after the first full "calendar" Moon following the Sun's passage of the vernal equinox.

Equator, celestial. The great circle of the celestial sphere midway between the poles.

Equator, terrestrial. The imaginary circle on the Earth's surface midway between the Earth's north and south poles. The celestial and terrestrial equators lie in the same plane.

Full sea. High water, or high tide.

Golden Number. The number of the year in the Metonic cycle. This is a cycle of 19 years established in Greece by Meton in the year 432 BC. It is almost exactly equal to 235 synodic months (a synodic month being the interval between successive new Moons), so that in years which have the same golden number the Moon's phases recur on the same dates.

Heliocentric latitude. Apparent distance north or south of the ecliptic, as seen from the Sun.

Horizon. The true, or astronomical, horizon is the great circle which is the intersection with the celestial sphere of a level plane passing through the observer's position. The apparent horizon is the line which limits the observer's view of the sky.

Inclination. As applied to the orbit of a comet or planet, inclination signifies the angle between the plane of that orbit and the plane of the Earth's orbit, or ecliptic.

Julian Period. A period proposed by Joseph Scaliger in 1582 AD to harmonize chronological systems. Its length is 7980 Julian years, being the least common multiple of the solar cycle, the Metonic cycle, and the Roman indiction. The first year of the Julian Period was 4713 BC, which was the year 1 in each of the three component cycles. The designation of a year in the Julian period is intelligible to any chronologist, whatever may be his religion.

Latitude (of a place on the Earth). The angle between the direction of gravity at the place and the plane of the Earth's equator. It is a measure of the distance of the place from the equator.

Length of Days. Time-interval between sunrise and sunset.

Longitude (of a place on the Earth). Arc of the equator between the meridian of the place and another meridian chosen as a standard, usually that of Greenwich, England.

Meridian. Great circle of the celestial sphere passing vertically north and south, through zenith and poles. Also, a north-south line on the surface of the Earth.

Meteor. A small, solid body which, revolving in an orbit around the Sun, enters the Earth's atmosphere and is made luminous by the consequent sudden stoppage of its swift flight. Often erroneously called a *falling* or *shooting star.* After falling upon the Earth, the body is called a *meteorite.*

Moon's Place. As tabulated in the Almanac, this signifies the sign of the zodiac occupied by the Moon.

Moon Souths. Moon is on the meridian, due south of the observer.

Morning and Evening Stars. A planet is called Morning Star when it is above the horizon at sunrise, and Evening Star when it is above the horizon at sunset.

Node. The point at which a heavenly body apparently crosses the ecliptic; *ascending* if northward, *descending* if southward.

Opposition. Elongation of 180°. At opposition, a planet appears opposite the Sun.

Penumbra. Partial shadow.

Perigee. Point nearest the Earth.

Perihelion. Point nearest the Sun.

Phases of the Moon. The four principal phases of the Moon are: (1) *New Moon*, which occurs when, for the month, the Moon is most nearly between the Earth and the Sun; (2) *First Quarter*, which occurs about a week after New Moon when the angle Sun-Moon-Earth is 90° and half the Moon's illuminated side, or a quarter of the Moon, is visible; (3) *Full Moon*, when the Moon is most nearly opposite the Sun; and (4) *Last Quarter*, when the angle Sun-Moon-Earth is again 90°.

Planet. An opaque body which revolves around the Sun in a nearly circular orbit near the plane of the ecliptic. The principal planets, in order of distance from the Sun, are Mercury, Venus, the Earth, Mars, Jupiter, Saturn, Uranus, Neptune, and Pluto. Of these, Venus, Mars, Jupiter and Saturn are brilliantly conspicuous to the naked eye, and Mercury also is bright but so near the Sun as to be found only with some difficulty. A planet may be distinguished from the "fixed" stars by its comparatively steady light and, if watched for a few nights, by the fact that it does not remain fixed relative to apparently neighboring stars.

Pole. Point in the sky around which the apparent diurnal rotation of the sky takes place; point where the Earth's axis intersects the celestial sphere.

Quadrature. Elongation of 90°.

Refraction, atmospheric. Bending of the light of a heavenly body within the Earth's atmosphere, which causes the body to seem higher in the sky than it really is.

Right ascension. Apparent distance, measured along the celestial equator eastward, from the vernal equinox.

Rising, setting. Appearing upon the horizon. The times of rising and setting of the Sun and Moon, given in the Almanac, are the times at which the upper point of the body's disk would appear at the true horizon to an observer at sea level. They are therefore corrected for atmospheric refraction, but not for dip.

Roman Indiction. An arbitrary cycle of 15 years used in Roman and ecclesiastical history. The year 1 of the first cycle was the year 313 AD.

Runs high, runs low. Has greatest declination, north or south; has greatest or least altitude in the sky at meridian passage. Used in reference to the Moon.

Signs of the zodiac. Ancient divisions of the zodiac, each 30° in length, beginning at the vernal equinox and named for the twelve zodiacal constellations.

Solar Cycle. A period of 28 years, after which the days of the week, in the ancient Julian calendar, fell on the same days of the year.

Sun fast, Sun slow. Difference between local apparent solar time (sun-dial time) and the kind of time (Eastern Standard) used in the Almanac. The Sun is "fast" when the sun-dial indicates noon before Eastern standard noon. At Boston and vicinity the Sun is always "fast," but farther west it is alternately "fast" and "slow."

Stationary. Having no apparent motion among the stars. The apparent motion of each planet among the stars is of a zigzag nature, being toward the east for a considerable time, then westward for a shorter time, and then again eastward. At the points of reversal the planet is "stationary."

Time. The time of day, or number of hours and minutes since a certain point in the sky, chosen for reference, was on the meridian. For *apparent solar time* (sun-dial time) the point of reference is the Sun. Since the Sun moves in the sky at a rate which is not constant, it is impracticable to make clocks keep apparent solar time, and so a fictitious "mean sun," which moves in the celestial equator with uniform speed, is used instead, giving *mean solar time*. *Standard time* is the mean solar time of a certain meridian which is chosen as standard for a considerable region; these meridians are chosen at regular intervals from Greenwich, and *Eastern Standard Time* is Greenwich mean solar time *minus* exactly five hours. For further details, see the Almanac for 1934.

Umbra. Complete shadow.

Vernal Equinox. The point at which, in its apparent annual motion, the Sun crosses the celestial equator from south to north; the point occupied by the Sun at the moment of the beginning of Spring.

Zodiac. The belt of sky, eighteen degrees wide, which has the ecliptic as its central line. It contains the twelve zodiacal constellations and, at all times, the Sun, Moon, and principal planets.

WEDDING ANNIVERSARIES

First Year	Paper	Fifteenth Year	Crystal
Second	Cotton	Twentieth	China
Third	Leather	Twenty-fifth	Silver
Fourth	Silk	Thirtieth	Pearl
Fifth	Wooden	Thirty-fifth	Coral
Sixth	Iron	Fortieth	Ruby
Seventh	Copper	Forty-fifth	Sapphire
Eighth	Bronze	Fiftieth	Gold
Ninth	Pottery	Sixtieth	Diamond
Tenth	Tin	Seventy-fifth	Diamond

UNUSUAL ARRAY OF THE BRIGHT PLANETS IN 1940

On several occasions in 1940 the bright planets will display configurations of unusual interest. Throughout the first three months Venus, Mars, Jupiter and Saturn will all be conspicuous in the evening sky, and in the evenings of late February and early March Mercury also will be visible. In the midnight skies of summer and autumn, Jupiter and Saturn will appear close together and will present a striking spectacle.

Relative to the stars, Mars' apparent motion throughout the year will be direct—that is, eastward, near the ecliptic. On January 7 Mars will pass about a degree north of Jupiter, and on February 13 about three degrees north of Saturn. Interest in the conjunction of Mars and Saturn will be heightened by their close proximity to the crescent Moon.

Venus, moving eastward among the stars, will pass about a degree north of Jupiter on February 20, three degrees north of Saturn on March 8, and two degrees north of Mars on April 10. On the last-mentioned date Venus, Mars, and the three-day-old Moon will be near the Hyades and Pleiades. Reversing her apparent motion on June 5, Venus will meet Mars again on June 7, passing 22′ north of him with Mercury and the thin crescent Moon only a few degrees away; but this spectacle will be enveloped in such bright twilight that, unless the sky be unusually clear, it may not be very impressive. After becoming a morning star on June 26 and again reversing her apparent motion on July 18, Venus will again overtake Mars on December 2 (in the morning sky) and pass about a degree to the north of him.

Moving directly, Jupiter will overtake Saturn on August 15 and pass about a degree to the north; then, both planets having changed to a slow retrograde motion, Jupiter will again overtake Saturn on October 11 and pass about a degree to the north. Early in 1941, having again assumed direct motion, Jupiter will overtake Saturn again. The Moon will be near Jupiter and Saturn on July 28, August 24, September 20, October 17, November 13, and December 10.

RECENT COMETS

During the year which ended June 30, 1939, three new comets were observed by astronomers, as follows:

1. Comet 1939 a, discovered independently by Kosik at Tashkent, Turkestan, and by Peltier at Delphos, Ohio, January 20, 1939. At its brightest it was of the seventh magnitude (not quite visible to the unaided eye) and had a tail about one degree long. Its orbit is parabolic and lies in a plane inclined 64° to the plane of the ecliptic. The comet passed perihelion on February 6, 1939, at a distance of 67,700,000 miles from the Sun.

2. Comet 1939 b, discovered by Väisälä at Turku, Finland, March 14, 1939. It was too faint for observation except with large telescopes, being of the fifteenth magnitude. Its orbit is elliptic with a period of 10.7 years, eccentricity 0.64, and inclination 11° to the plane of the ecliptic. The comet passed perihelion on March 20, 1939, at a distance of 163,000,000 miles from the Sun.

3. Comet 1939 d first reported by Hassel from Oslo, Norway, April 16, 1939, but discovered independently by a number of observers in Europe and North America. It was of magnitude 3, plainly visible to the naked eye in the evening twilight, especially to observers in northerly latitudes since it was situated well north of the Sun; and, as seen in small telescopes, it displayed a tail 5° long. The motion is retrograde, in a parabolic orbit inclined 41° to the plane of the ecliptic. This comet passed its perihelion on April 10, 1939, at a distance of 49,000,000 miles from the Sun.

In addition to these new comets, the periodic comet of Schwassmann and Wachmann continued under observation, and during the first half of the year 1939 the periodic comets of Pons-Winnecke, Kopff, and Brooks were re-observed.

MASSACHUSETTS

By LEVERETT SALTONSTALL, Governor

When we think of our early school years and our first studies in Massachusetts history, we sometimes dream of Indians, pilgrims with odd high hats, and rough stockades. Always in our reflections are dark forests, yellow corn, and waving fields. That was the beginning of our complex Commonwealth, as we know it today. And today those fields and forests play a larger part in our destiny than perhaps we realize, for may we not in time more nearly approach again the self-sufficiency which marked the life of those early times?

As the small clearings became larger farms, so also enterprise in the villages changed the housewives' spinning wheels into small mills. Small mill towns upon the banks of our rivers and streams later became the great industrial centers of the East. Yet with these large concentrations of our population in industrial centers, Massachusetts is still a farming state, for agriculture holds first position in the Commonwealth in capital investment, while in value of products sold it takes third place. With forty-two per cent of the land in farms, the proportion of elderly folks deriving their entire livelihood from farms is even greater than in industry.

If its problems are met wisely, agriculture can contribute generously to the progress of Massachusetts. By virtue of their close connection with home life and the investment they represent in real estate, farm lands constitute a tax revenue which is especially important because of its permanence. One of the problems is that decline of industry in a score of New England communities has heaped tax burdens on rural real estate which threaten to multiply farm abandonment. A rural planning study is already being made by Harvard University, in collaboration with Massachusetts State College, the state planning board and other agencies. This is a "rural planning" study, in which the industrial situation is also being explored, town by town, with a view to adapting the rural plans to each individual situation. At the same time, whatever "city planning" we undertake should be related to agriculture and forestry in the surrounding area. Will our dairy farming be able to stand the competition of midwestern cream and milk? Can our poultry industry meet the competition of midwestern eggs and the broilers from the Del-Ma-Va peninsular? What part of our timber needs will be supplied by the New England forests twenty-five or one hundred years from now? How can we better bring together our producers and their markets with a minimum of distribution costs? Each locality has its own problem.

We can be proud of the progress made in recent years in many fields of Massachusetts agriculture. In spite of the difficult situation in the dairy business, it has held its own during the past twenty years. Control of markets by the federal and state orders has tended to increase the farmer's confidence in the destiny of this great Massachusetts industry, heightened by the decision in June of the United States Supreme Court.

The poultry industry has expanded rapidly since the war, increasing 30 per cent in the past ten years—years in which business generally was decreasing. Massachusetts breeders have carried the standard of disease-free, high production flocks to the entire nation, and names of Massachusetts men who have pioneered in this work are legion.

Market gardeners and fruit growers have seriously felt the competition from outside areas, fostered by improved rapid refrigerator transportation. Yet orchards have grown fifteen per cent in twenty years. The indomitable spirit of the Massachusetts farmer has done this, for he, too, has developed improved spraying or dusting equipment and found new methods with which to pare his costs.

Looking at the state agriculturally, we see in Bristol County an increase in market gardening; in Plymouth County, more eggs and poultry products; on the Cape, better cranberries, asparagus, and strawberries; in Essex, Middlesex, and Norfolk, a growth of estate farming, breeding of pure-bred dairy cattle, and poultry breeding establishments; in Worcester and Middlesex, development of dairy farming and the famous "Nashoba Fruit Belt," where is held annually the lovely apple blossom festival. Franklin, Hampshire, and Hampden Counties, ever associated with tobacco and onions, are turning more and more toward potatoes, with dairying also coming back.

And through the Berkshires, we find a real revival in the "Hill Town Farms," where agriculture is agriculture. There the farmers live as we were meant to live, on the land and off the land. There

Cont. on Page 56

TIDES IN NEW YORK HARBOR, 1940

The following table gives the times of Full Sea at the Battery, New York City. The Heights of High Water at that point range from 3.2 to 5.9 feet.

1940	JAN.		FEB.		MARCH		APRIL		MAY		JUNE	
Day of Month	Full Sea N. Y.		Full Sea N. Y.		Full Sea N. Y.		Full Sea N. Y.		Full Sea N. Y.		Full Sea N. Y.	
	Morn h	Even h	Morn h	Even h	Morn h	Even h	Morn h	Even h	Morn h	Even h	Morn h	Even h
1	1	1	2½	2¾	2	2½	3½	4¼	3¾	4½	4¾	5½
2	1¾	2	3½	4	3	3½	4½	5¼	4¾	5¼	5¾	6
3	2¾	3	4½	5	4	4¾	5½	6	5¾	6	6½	6¾
4	3¾	4¼	5½	6	5	5¾	6¼	6¾	6¼	6¾	7¼	7¼
5	5	5¼	6½	6¾	6	6½	7	7¼	7	7¼	7¾	7¾
6	5¾	6¼	7¼	7½	6¾	7¼	7½	7¾	7¾	7¾	8½	8½
7	6¾	7	7¾	8¼	7½	7¾	8¼	8¼	8¼	8¼	9	9
8	7½	7¾	8½	8¾	8	8¼	8¾	8¾	8¾	8¾	10	9¾
9	8	8½	9	9½	8½	9	9¼	9¼	9¼	9¼	10¾	10¾
10	8¾	9¼	9½	10	9¼	9¼	9¾	9¾	10	10	11¾	11¾
11	9½	10	10¼	10½	9¾	9¾	10¼	10¼	11	10¾	..	0¾
12	10	10½	10¾	11	10	10¼	11	11	11¾	11¾	0¾	1½
13	10¾	11¼	11¼	11½	10½	10¾	11¾	..	..	0¾	1½	2½
14	11¼	0	11¾	..	11¼	11½	0	0¾	0¾	1¾	2¾	3½
15	0	..	0¼	0½	..	0	1	2	1¾	2¾	3¾	4½
16	0½	0½	1	1½	0½	1	2	3	3	3¾	5	5½
17	1¼	1¼	2	2½	1¼	2	3¼	4¼	4	5	6	6½
18	2	2¼	3	3¾	2½	3¼	4½	5¼	5¼	5¾	6¾	7¼
19	3	3¼	4¼	5	3¾	4½	5½	6¼	6¼	6¾	7¾	8
20	4	4½	5½	6	5	5¾	6½	7	7	7½	8½	8¾
21	5	5½	6½	7	6	6½	7½	7¾	8	8¼	9¼	9½
22	6	6½	7¼	7¾	7	7¼	8¼	8½	8¾	9	10¼	10¼
23	6¾	7¼	8	8½	7¾	8¼	9	9½	9¾	10	11	11¼
24	7½	8	8¾	9¼	8½	9	10	10¼	10½	10¾	11¾	0
25	8¼	8¾	9¾	10¼	9¼	9¾	11	11¼	11½	11¾	..	0½
26	9	9¾	10½	11¼	10¼	10¾	11¾	..	..	0½	0¾	1¼
27	10	10½	11½	..	11¼	11¾	0¼	0¾	0½	1¼	1¼	2
28	10¾	11½	0	0½	..	0¼	1	1¾	1¼	2	2	2¾
29	11¾	..	1	1½	0½	1¼	2	2¾	2¼	2¾	3	3¾
30	0½	0¾			1½	2¼	3	3½	3	3¾	4	4½
31	1½	1¾			2½	3¼			4	4½		

TIDES IN NEW YORK HARBOR, 1940, Cont.

The following table gives the times of Full Sea at the Battery, New York City. The Heights of High Water at that point range from 3.2 to 5.9 feet.

1940	JULY		AUGUST		SEPT.		OCT.		NOV.		DEC.	
Day of Month	Full Sea N. Y.		Full Sea N. Y.		Full Sea N. Y.		Full Sea N. Y.		Full Sea N. Y.		Full Sea N. Y.	
	Morn h	Even h	Morn h	Even h	Morn h	Even h	Morn h	Even h	Morn h	Even h	Morn h	Even h
1	5	5½	6¼	6½	7¼	7½	7¾	8	9	9½	9½	10
2	5¾	6¼	7	7¼	8	8¼	8½	8¾	9¾	10½	10½	11
3	6¾	6¾	7¾	7¾	8¾	9¼	9¼	9¾	10¾	11½	11¼	0
4	7¼	7½	8½	8½	9¾	10	10¼	10¾	11¾	..	..	0¼
5	8	8¼	9¼	9½	10½	11	11¼	11¾	0½	0¾	0¾	1
6	8¾	9	10	10¼	11½	0	..	0¼	1¼	1¾	1¾	2
7	9½	9¾	11	11¼	..	0½	0¾	1¼	2¼	2½	2½	2¾
8	10½	10½	0	..	1	1½	1¾	2¼	3¼	3½	3½	3¾
9	11½	11½	0¼	1	2	2½	2¾	3¼	4¼	4½	4¼	4½
10	..	0¼	1¼	2	3	3½	3¾	4¼	5	5¼	5¼	5½
11	0½	1¼	2¼	3	4¼	4¾	4¾	5	5¾	6	6	6¼
12	1½	2¼	3¼	4	5¼	5½	5¾	6	6½	6¾	6½	7
13	2½	3¼	4½	5	6	6½	6¼	6¾	7	7½	7¼	7½
14	3½	4¼	5½	6	6¾	7	7	7¼	7¾	8	7¾	8¼
15	4¾	5¼	6½	6¾	7½	7¾	7½	7¾	8¼	8½	8¼	8¾
16	5¾	6¼	7¼	7½	8	8¼	8	8½	8½	9	8¾	9½
17	6¾	7	7¾	8¼	8½	8¾	8½	9	9	9¾	9½	10¼
18	7½	7¾	8½	8¾	9¼	9½	9	9½	9¾	10½	10¼	11
19	8¼	8½	9¼	9¼	9½	9¾	9½	10	10½	11¼	11	0
20	9	9¼	9¾	10	10	10¼	10	10½	11¼	..	..	0
21	9¾	9¾	10¼	10½	10½	11	10¾	11½	0¼	0¼	1	1
22	10½	10½	11	11	11¼	11¾	11½	..	1¼	1¼	1¾	2
23	11¼	11¼	11½	11¾	..	0	0½	0½	2¼	2¼	3	3
24	11¾	11¾	..	0¼	0¾	1	1½	1½	3¼	3½	4	4¼
25	..	0½	0¼	1	1¾	2	2½	2¾	4¼	4½	5	5½
26	0½	1¼	1¼	1¾	3	3¼	3¼	4	5¼	5¾	6	6½
27	1¼	1¾	2¼	2¾	4¼	4½	4¾	5	6¼	6½	6¾	7¼
28	2	2¾	3¼	4	5¼	5½	5¾	6	7	7½	7¾	8
29	3	3½	4¾	5	6	6½	6½	7	8	8¼	8½	9
30	4	4¾	5¾	6	7	7¼	7¼	7¾	8¾	9¼	9¼	9¾
31	5¼	5½	6½	6¾			8¼	8½			10	10½

THE FARM OUTLOOK

By M. GALE EASTMAN

Agriculture in the United States has been a changing, ever-progressive industry. It has suffered from growing pains, to be sure, and these growing pains have failed to diminish with age. Unlike the usual biological growth of the individual plant or animal, agriculture in this country in its change and development as a whole has been conspicuously accelerated in its later or most recent years. Some of the homely remedies, so far administered, have failed to give adequate and timely relief. More efficient and scientific medicine is necessary, and is in process of preparation, through self-help and education. However, growing pains are a good sign. They do not portend permanent injury nor even weakness—quite the contrary.

In the general pessimism of the times, let us not deceive ourselves about agriculture. True it is that for more than twenty years since the World War, agriculture in America has not had its fair share of the nation's income. It suffered the terrible blight of the early twenties when an artificially bolstered price level finally had to break some two years after the war. A falling price level must ever reflect disproportionally on farmers as producers of basic commodities. In the later twenties, farmers were denied the thrills of participating in the orgics of riotous spending and fictitious incomes so common to other walks of life. Farmers even had to submit to the taunts of great "captains of industry" who previous to the year 1929 developed such a feeling of over-confidence that they presumed to brag about their superior abilities to keep "big business," so-called, always on the upward climb, and even to prophesy that they would soon be taking over this business of agriculture in order to teach farmers how to farm.

Finally, the present depression of the thirties drove prices to new depths from which the farmer of the United States could extract not quite half-pay for his products, as compared to pre-war, and yet must pay many times more for taxes, interest, insurance, education, etc. However, there is encouragement in recent substantial improvements in farm prices and resulting farm incomes, if not a little satanic consolation in the fact that "big business" during the latest slump in prices has had its own problems in great sufficiency, and is not volunteering to criticize farmers too caustically, nor to furnish them leadership presumably en route to the promised land.

One morning, recently, the thermostat in my home had blown a fuse and the thermometer registered something below normal. My daughter, a college student, had to get up before the fire had sufficiently recovered to afford a temperature of more than 60. How she suffered with the cold you can best imagine! I could sympathize with her out of my experience in getting up at her age to kindle a fire—in a farm home where the last remains of wood in the kitchen range had been contemporaneous with the hour of retirement the night before.

There was no telephone in that former house, nor even near by. The nearest doctor was at least two hours away. For all time there had been no mail box nearer than eight miles, and even later, with the first rural delivery no nearer than a mile across the fields. Radios had not yet been even prophesied. One "horseless carriage" had passed the door, and I had preceded the rest of the community down to the foot of a near-by hill to see if it had escaped destruction, anticipating incorrectly that it had not. One of Edison's early wax record "talking-machines" had come for a time by an itinerant laborer to a neighbor's house. Electric light and electric farm power were scarcely heard about.

The American history I studied told me about times still less propitious. In those older times, mind you, they had neither matches nor stoves. Think of it! When they lost the fire overnight in the big fireplace, someone had to bundle up and hurry away to the nearest neighbor and borrow some coals, or rub two dry sticks together till they ignited.

Agriculture has changed. Some of you, young enough to be contemplating a lifework, check with older people and see if my illustrations are consistent. Agriculture is going on to further conquests and satisfactions, too. It is still worth while, worthy of a man, the most important job in the world.

NEW THOUGHTS ON GARDENING

By J. R. HEPLER

I am sure that many of the readers of the "Old Farmer's Almanac" are interested in soilless agriculture. This has been advertised a great deal in recent years although it is not really fitted to the needs of the amateur gardener. It must be remembered that the most important factor in plant growth is the mauufacture of starch and sugar out of carbon dioxide and water by the chlorophyll or green coloring matter in the plants. This can go on only in sunlight. Therefore, the yield of plants is limited to the area which has been exposed to the sunlight and also to the amount of sunlight which is available. It is ridiculous to suppose that people can grow plants in cellars or on house tops, in closets or other dark corners any easier in water solution than they can in soil. However, people with small greenhouses and with an investigating spirit of mind can grow plants in sand cultures or in water cultures if the proper nutrients are used.

The popularity of hybrid sweet corn continues to increase. Our plant breeders have giveu us the Early Gemcross 6 or the Early Gemcross 13, a later variety kuown as Marcross 13.6, and still a little later variety of much better quality called Bancross, and then the varieties with the best eating quality, the Charlcross and the Golden Cross Bantam. These two require from 75 to 90 days to mature edible corn. The person growing hybrid corn must remember always to buy his seed since the corn if planted the second year will not come true.

Many home gardeners who grow cabbage have allowed cabbage worms to spoil their cabbage because they did not wish to use Lead Arsenate or any other poison on the cabbage plant. Also the ugly tomato worm which does so much damage in late July and August had to be hand-picked because people did not like to apply a poisonous solution on the tomato plants. Now Pyrethrum or a Rotenone dust or spray or a combination of the two can be used. These insecticides are poisonous to insects but harmless to human beings.

Perhaps most of us have had very little trouble raising tomatoes on stakes and have been able to raise more and better fruit on a smaller area by pruning and staking. However, handling cucumbers in this same way is difficult and yet may be done in much the same way. City gardeners who have little land and may have a southern or southeastern wall or exposure, can cover an upright trellis with cucumbers in the same way that they would a grape vine. The side shoots of the cucumbers are usually cut off beyond the second joint. Special varieties with some greenhouse blood such as Granite State, the Longfellow, Straight 8, or the Ace are good for staking purposes.

Two varieties of watermelon imported from Japan—Sweet Japanese and Early Sugar—have proved a treasure trove to melon lovers in northern New England. They are not very large in size—5 to 10 lbs.—but ripen from 10 to 20 days before any of the early American varieties. Apparently this melon is suited to the low temperatures of northern New England and will mature in approximately the same time as the southern varieties will ripen in the warmer temperatures of the south. It will not have the same value in southern New England and the middle Atlantic states that it will in northern New England. Readers of the "Old Farmer's Almanac" can get a small sample by writing to the Horticultural Department at Durham, N. H.

Celery growers have been bothered of late years by early and late blight of celery and by a heartburn which is caused by an insect known as the Tarnished Plant Bug. In ordinary seasons a high grade celery free from these troubles can be grown by dusting with a mixture made of 44 parts of dusting sulphur, 44 parts of hydrated lime, and 12 parts monohydrated copper suphate. If mixed at home it might be mixed in the proportion of 4 pounds of dusting sulphur, 4 pouuds of hydrated lime, and 2 pounds of monohydrated copper sulphate. This should be dusted on the celery at least once every week or ten days.

People growing plants in kitchen windows or small greenhouses have often had trouble getting a suitable soil; it was full of damping off and other diseases. Such folks will welcome the news that very fine plants can be grown in sand, fed once a week with a solution made as follows. Put two teaspoonfuls of a 5-8-7 fertilizer in a gallon of water, allow it to remain a few minutes and then pour off the liquid from the undissolved particles of the fertilizer. Water the plants with this solution once every week or ten days and you will be surprised to see their growth and how healthy they really are.

RUBBER ON THE FARM

By F. W. TAYLOR

It is a long jump from the heavy, clumsy and springless carriages and farm implements of a hundred or more years ago to the modern autos, trucks, and implements of our present day. Elliptical springs for carriages were not in use until 1804 when Obadiah Elliott, an American inventor, secured a patent on them. These springs not only added to the comfort of travel, but greatly reduced the weight and clumsiness of the carriages.

The next important innovation in carriage building was the use of rubber tires, first of solid rubber, then of "sponge" rubber, and finally of inflated or air-cushioned rubber. These early rubber tires were first used on bicycles, but their application to racing sulkies and buggies soon followed. The writer well remembers the first inflated or "balloon" tires he ever saw at some bicycle races in northern Ohio about the middle "eighties." These tires were single tubes some 2½ or 3 inches in diameter and were a great curiosity.

Rubber tires, of course, reached their greatest development with the advent of the automobile shortly after the turn of the century. The tires of today, however, are quite different in quality, size, and durability from those of thirty years ago. In 1908, the writer bought 28 x 3 tires for his first automobile at a cost of about $20, and he was lucky if he could get 2,500 or 3,000 miles out of them. Now he buys 16 x 600 tires at little more than half the price, and if he does not get 30,000 miles out of them, he thinks they are no good. Tires are now made in varying weights and sizes for different purposes with thicknesses from 4-ply up. The largest on record were recently made by an Akron, Ohio, firm under Government contract. These were 24 x 36-inch, 32 ply, and weighed 1100 lbs. apiece.

In 1930 low-pressure pneumatic tires began to be applied to farm implements. Naturally, the farm tractor was the first to be experimented with. From the beginning the results were highly satisfactory. As a spectacular stunt in the fall of 1933, Barney Oldfield drove a rubber-tired farm tractor on a Western fair ground track at the rate of 64 miles per hour. Within the next few years agricultural engineers were quietly testing these rubber-tired tractors under all sorts of farm conditions and setting down the results.

Some of these early figures were very surprising. In plowing it was found that the rubber tires needed only 91% as much gasoline per drawbar horsepower as steel wheels. It was further found that the greater efficiency of rubber made it practical to do work in high gear which could be done only in second gear with steel wheels. In cultivating corn, and in driving various harvesting machines it was found that the rubber-tired tractors used only from 66% to 78% as much fuel as the steel wheels, and could cover from 127% to 136% as many acres per hour.

The advantages of a rubber-tired tractor may be summarized as follows:

1. Less fuel consumption and faster work.
2. Longer life of the tractor, due to absorption of jars by the tires.
3. Ease of handling; greater comfort and protection of the driver.
4. Avoidance of dust storms that follow steel wheels.
5. Can be driven fast or slow over improved highways.

Today more than half the farm tractors are equipped with rubber tires as they leave the factory.

Besides his auto, his truck, and his tractor, the farmer is now getting rubber tires on his wagons, his manure spreader, his mowing machine, his power sprayer, his wheel harrow, his seeder, his cultivator, and even his wheelbarrow.

On a mileage basis, rubber tires will far outwear steel tires. Although their first cost is somewhat higher than that of steel, this is offset by the greater speed, convenience, comfort, and decreased draft resulting from their use. Just as the elliptical spring made possible the construction of lighter carriages and implements, so has the pneumatic tire made lighter the burden of the modern farmer. Surely rubber is playing a most important role on our present-day farms.

STATE AGRICULTURAL EXPERIMENT STATIONS

New England States

MAINE
Location ..... Orono
Director ..... Fred Griffee

NEW HAMPSHIRE
Location ..... Durham
Director ..... M. G. Eastman

VERMONT
Location ..... Burlington
Director ..... J. L. Hills

MASSACHUSETTS
Location ..... Amherst
Director ..... F. J. Sievers

RHODE ISLAND
Location ..... Kingston
Director ..... G. E. Adams

CONNECTICUT
Location ..... Storrs
Director ..... W. L. Slate

Middle Atlantic States

NEW YORK
Location (New York State) Geneva
Director ..... P. J. Parrott
Location (Cornell Univ.).. Ithaca
Director ..... Carl E. Ladd

NEW JERSEY
Location ..... New Brunswick
Director ..... W. H. Martin

PENNSYLVANIA
Location ..... State College
Director ..... R. L. Watts

DELAWARE
Location ..... Newark
Director ..... C. A. McCue

MARYLAND
Location ..... College Park
Act'g Director .... J. E. Metzger

WEST VIRGINIA
Location ..... Morgantown
Director ..... C. R. Orton

STATE AGRICULTURAL EXTENSION SERVICE LEADERS

New England States

MAINE
R. C. Dolloff ..... Orono

NEW HAMPSHIRE
E. P. Robinson ..... Durham

VERMONT
H. W. Soule ..... Burlington

MASSACHUSETTS
S. R. Parker ..... Amherst

RHODE ISLAND
R. H. Hewitt ..... Kingston

CONNECTICUT
R. K. Clapp ..... Storrs

Middle Atlantic States

NEW YORK
Earl A. Flansburgh ..... Ithaca

NEW JERSEY
E. A. Gauntt .... New Brunswick

PENNSYLVANIA
M. S. McDowell .... State College

DELAWARE
A. D. Cobb ..... Newark

MARYLAND
E. I. Oswald ..... College Park

WEST VIRGINIA
R. H. Gist ..... Morgantown

ROADSIDE HUSBANDRY

By WILLIAM G. VINAL

Director of Nature Guide School, Massachusetts State College

Travelers on our modern highways are frequently impressed with the aspect of some old-time farm house, originally located in a truly rural setting and now stranded at the edge of a concrete paved artery with an endless stream of traffic rushing past its ancient doorway, and suffer a kind of emotional nostalgic pang in the realization of how different is the present outlook from that enjoyed by the original occupants at the time it was built. Perhaps there is a trout brook which formerly flowed beneath a rustic bridge, now spanned by a massive cement culvert, whose current once rippled over pebble stones and is now diverted by the obstruction of an abandoned automobile tire in the bed of the stream. The entrance to an adjacent grassy lane is disfigured with a conglomerate litter of sardine tins, empty bottles and ungathered basketfuls of fragments which have fed a multitude of untidy picnickers. That once pleasant prospect of hill and dale is almost totally obscured by flamboyant billboards blatantly asserting the doubtful claims to pre-eminence of some brand of cigarette or toothpaste. But worst of all is that rusted skeleton of a defunct automobile corroding among the daisies in the abandoned field. No one disputes the contention that the primitive soft clay roads with their wheel ruts and horseshoe imprints were far more picturesque features of the landscape than those parallel ribbons of concrete which are the resultant by-products of our motorized civilization, but these triumphs of the engineer's art are here to stay, for better or for worse, and our problem is to make the best of the situation.

What can be done about it? Surely a concerted effort must be made to conserve, as far as is possible, what remains of the pristine beauty of our roadsides and to improve the appearance of the motor avenues which have replaced them. Care should be given and study made to preserve native shrubs and wild flowers, to clean up all trash and to stimulate a public interest to prevent thoughtless campers and picnickers from scattering about the remains of their wayside meals. Parking areas should be designated and rubbish containers so placed as to be as little conspicuous as may be possible. Filling stations and roadside markets and lunch-rooms in most instances should be moved back a little further into the background and encouragement might be given to make such structures harmonize with the natural environment.

Many communities have appointed non-political commissions comprised of responsible individuals who possess the requisite knowledge and experience to advise in such matters, including in the group an engineer and a landscape architect. Motorists will notice that in many localities towns are making valiant efforts towards improvement of the appearance of their roads and highways with an eye for proper grading and planting. Much credit is due to the pioneers in this admirable work.

Headway is being made in the campaign against unsightly signboards. The greatest hope in this direction lies in awakening sufficient public interest and civic pride to spread a revulsion of taste creating a general disapproval great enough to defeat the commercial benefit for which they were erected.

The more pleasing the prospect which our roadsides present, the more tourists will be attracted to enjoy the natural beauties which the New England countryside rightly affords.

Remember that our highways are not only built for speed, safety and comfort of those who use them, but also to give access to the beauty and scenic attraction of the country they traverse.

The Massachusetts State College holds an annual Outdoor Recreation Conference. One of the features for the seventh Conference Exhibition to be held March 7-10, 1940, is Roadside Husbandry. Just before the conference a complete program will be mailed free on request.

EDUCATION IN A CHANGING ERA

By WALTER F. DOWNEY

Commissioner of Education, Commonwealth of Massachusetts

Over the last four deeades, the enrollments in the public high schools of the United States have inereased more than thirty-fold. In the 25,000 public high schools of the nation, nearly 7,000,000 pupils are enrolled.

This is an astonishing inerease—more rapid than any found at any other time in any other nation. These enrollment figurcs indicate the degree to which the youth of the land are taking advantage of the opportunities found in seeondary schools. In addition to this fact, there are thousands of boys and girls, who, when they arrived at the work-permit age, and who would have left sehool if they could have found work, remained in school. Others who had been at work enrolled again when they were out of employment.

In the elementary schools there appears to be no such increase. In fact, in this part of the school system there has been an aetual deerease in numbers, due probably to a falling birth rate.

In voeational schools and classes operating under State supervision, including those aided by Federal funds, there appears to be an inerease in enrollment in agrlcultural sehools, in trade, industrial, and home-economies classes. The part-time general continuation schools and elasses show a great decrease in enrollment.

The problem of unemployed youth is serious indeed. The United States Unemployment Census of November, 1937, indicates that 51.1% of workers betweeu 15 and 19 years of age were totally unemployed; and 24.3% of workers betwcen 20 and 24 years of age werc also without work. In Massachusetts alone it is estimated that at that time there were 120,000 unemployed young people.

It is beeoming more and more evident that unemployment and the consequent increase in enrollment in the secondary sehools has focused the attention of school authorities upon the need for advising, eounseling, and training students in occupational fields.

While as yet there has been no widespread changc in the curriculum offerings of a large number of schools, the situation referred to above is indicative of rather comprehensive changes which may be expected in the not remote future. A natural result of the unemployment situation will be a broadening change in secondary-school services.

In the elementary field, due to economic conditions, there has been a shifting of population from the eity to suburban and rural areas. As a result of these ehanges there is need for increased school facilities in smaller communities, where there is often less ability to support schools by local taxation. There is, therefore, an increasing neeessity for adopting in all states a plan which is in effect in some states for raising and distributing school funds so as to equalizc edueational opportunities. Rural edueation has many problems—consolidated schools, itinerant teaehers and regular teachers, transportation, maintenance. No rural educational system can adequately serve isolated communities unless all states aeeept the responsibility for enaeting needed legislation which will give financial assistance and provide supervisory service in keeping with the needs of a local district.

Horace Mann, over a century ago, defined the public school system as "the great equalizer of the conditions of men, the balance wheel of social machinery." We may properly state that our school system as it is established in this nation is the means of handing down to future generations the principles of our Ameriean Republic. To safeguard these ideals, even in times of financial stringeney, we must preserve the standards of our schools. Sound public economy is neeessary. Sound education is equally important. In studying public expenditures and analyzing detailed expenses relating to school budgets, we may well bear in mind a portion of a memorial submitted by the American Institute of Instruetion to the Massaehusetts Legislature in January, 1837, viz.: ". . . so much of the intelligence and charaeter, the welfare and immediate and future happiness of all citizens, now and hereafter, depends on the condition of the eommon sehools; that it is of necessity a matter of the dearest interest to all of the present generation; that common education is to such a degree the Palladium of our liberties, and the good condition of our common schools, in whieh that education is chiefly obtained, so vitally important to the stability of our State, to our very existence of a free State, that it is the most proper subjeet for legislation, and calls loudly for legislative provision and proteetion."

CHARADES

By ARTHUR W. BELL

1

We use a figure when we speak
If we should style our riches gold;
The slangy metaphor is weak
To call the same My First, I hold.
My Last true characters may be,
To blacken them the devil's task;
When in My Whole yourself you see,
"Did I once look like that?" you ask.

2

Skin game, My First should warm a back
On which it didn't grow,
The S. P. C. A. raise My Last
That victims suffer so.
The worm which with My Whole is turned
Falls victim to the crow.

3

My First is a Spaniard of class,
My Last may permit one to pass,
My Total is simply an ass.

4

As knowu to all in Scripture versed,
Upon our sphere My Second burst
And ushered in the first My First.
Now should My Whole fail to appear
On every day of every year
Our mortal knees would quake with fear.

5

My First to do, the truth is sad,
Would make of good that which is bad;
And with My Last man's Maker hath,
As Omar said, beset man's path.
My Whole upon this page you see,
Its width and these lines' brevity
In inverse ratio must be.

6

My First, by nature never still,
Alike traverses vale and hill.
A lass My Second is today,
But cannot be, alas, for aye.
'Gainst gravity My Whole must earn
Its distance slowly, turn by turn.

7

My First upon the stairs may bark ones shins;
My Last must be o'erc.me by him who wins;
My Whole are more, and more alike, than twins.

8

My First, designed the flow to check,
Goes in the mouth and down the neck.
My Last though driven home with force
A thread may keep within its course.
Man with My Whole will access gain
To much from which he'd best abstain.

9

Be it right or be it left,
My First must ascertain the heft.
My Second, like a bride, should have a dot
And both are ill equipped if they have not.
My Last, a job, which by My First put through,
Became My Whole, that which My First could do.

10

A fisherman who told a lie
Repented at My First's shrill cry.
In durance short, as time is reckoned,
My Next and Third is but a second:—
Thus quickly crush My Whole to death,
Of baleful look and poisoned breath.
(Three syllables)

11

An article, this First of Mine,
Is used to limit or define,
Along a quite indefinite line.
Though passage through My Next be free,
With me I feel you will agree
That entrance lies beneath the key.
My Third may clearly be descried
In Dr. Jekyl and Mr. Hyde,
Though more pronounced in Mr. Hyde.
My Whole is a disordered state
Where men no rule will tolerate
Aud every law repudiate.

12

My First

Essential similarity
Denotes what it belongs to be,
A group, or clique, or coterie.

My Last

Was formerly a mound of sand
And moulded to ones taste by hand;
They now employ a wooden brand.

My Whole

Its lofty back retains the heat;
It constitutes a family seat
When, to capacity, replete.

The answers to these charades will be found on page 53

OUR FORESTS AND THE HURRICANE

By A. C. CLINE
Assistant Director, Harvard Forest, Harvard University

The great loss of standing timber caused by the hurricane of September 21, 1938, has served to center interest on forest conditions in the Northeast, and especially on the ways and means of starting new and better forests in place of those destroyed. The extremely small proportion of high quality timber among the hundreds of millions of board feet salvaged since last September and sold to the Federal Government is evidence enough that something is wrong; and it is very certainly nothing more nor less than the way in which we have grown our timber, or, rather, the way in which we have let Nature grow it for us. The main trouble lies right with the owner himself and his failure to apply in the past even the most elementary forestry practices. At least to those who have experienced selling hurricane timber under Government standards it is now clear that henceforth much more thought and care must be given to timber growing, if it is to show a profit.

What can we expect from "old field" or "pasture" pine which owes its origin solely to farm abandonment and which has grown up under the most unfavorable conditions possible as far as quality is concerned? Similarly, what can we expect from stands cut over two or three times during the past hundred years or so under the policy of always cutting the best and leaving the worst? The sum total effect of years of neglect and careless cutting is a deteriorated and depleted forest which does not begin to supply our needs. Our forests are like gardens which have been allowed to grow up to weeds.

Fortunately, it is now known, as a result of twenty-five years or more of research, how to grow high quality forest products. White pine may be used as an example. Pine which seeded in on old fields or pastures has always been characterized by extreme limbiness and crookedness. This is because such stands are practically "pure," that is, composed only of pine, and the trees are free to grow from the start. This freedom to grow unhampered under full exposure to the sun results in large, wide-spreading branches and severe weeviling, which causes the numerous forks and crooks so common in our present pine trees. Incidentally, pine plantations set out on open land will have a similar outcome, unless the plants are very closely spaced, and we shall gain little in improved future quality from this source.

By contrast, the high quality pine we once had in the early years of settlement generally grew in mixed stands with hardwoods and other conifers. Generally, early in life each pine was obliged to compete with taller neighboring trees which forced it to grow straight and tall, with small branches. The lower branches died through lack of sufficient light and, because of their small size, the mechanical action of the elements and nearby trees of shorter height effectively carried on natural pruning. Furthermore, as long as the pine remained partially overtopped and suppressed by taller trees, it was free from weevil attack and its bole continued to grow as a single, straight shaft. In time the more vigorous or more favorably situated pines overtook and passed their neighbors and extended their crowns into the space above the level reached by the hardwoods and other species of conifers. In this position the freed crown expanded rapidly and with it the growth rate of wood in the bole. And, since by this time most of the lower branches of the pine had broken off and fallen to the ground, layer upon layer of clear wood was laid down. So it was in the original mixed forests that high quality pine developed.

In the hurricane area many of the pure pine stands of old field or pasture origin blew down, and in their places will arise mixed stands more nearly like the original ones. This is a known fact of great significance. Studies made at the Harvard Forest show that in central New England the stands which follow the clear cutting of old field pine are invariably composed either of mixed hardwoods or of hardwoods and pine, depending upon whether the cutting was done in a pine seed year. Fortunately, there was an excellent crop of ripening seed on the pine at the time of the hurricane, so opportunity now is at hand to restore in a considerable measure the "natural" mixed forests of the past and to produce again the high quality white pine lumber so much prized by earlier generations. Failure to grasp this opportunity wherever it is presented, and, instead, the placing of dependence upon large-scale planting would be a colossal blunder and a huge waste of money.

Continued on page 70

CATS AND THEIR CARE

By ROBERT F. SELLAR

President, Animal Rescue League of Boston, Mass.

In a broad sense everyone **loves** birds—the majority **like** dogs—and entirely too many people **dislike** cats. The general attitude toward both birds and dogs is readily understood. They are appreciated, and rightly so, because their good points are so apparent. On the other hand the cat is termed a predator without qualification by all who entertain prejudice against the tribe, and no attempt is made to discern its good qualities which, incidentally, far outweigh objectionable tendencies. Few **well-fed** cats war on bird life. A starving animal, whether man or beast, naturally begs or steals the means for sustaining life, but it would be hard to imagine a farmer harboring a cat of any description if the **well-fed** animal were a real menace to baby chicks or other birds.

Unless dependent upon its own efforts to obtain food, the predatory instinct is directed against rats and mice. If forced to hunt for food, a mouse or two satisfies the appetite, the meal is followed by sleep, and the hunt is again resumed only when hunger returns. However, if given ordinary care, a healthy cat will work for hours at a time just as a **sport** exterminating property-destroying rodents on the farm and in the home.

Motherhood—The period of gestation in cats varies from fifty-six to sixty-five days. A suitable place for the cat and her anticipated family should be selected a few days prior to parturition. A comparatively small box in a dry, warm place and provided with adequate bedding, in which she may be confined, is recommended.

After parturition, the mother should be given her freedom, but extreme care should be exercised so that it will be impossible for her to carry the kittens away and hide them.

Kittens should be weened within five to six weeks. From the time of their birth great care should be taken to protect them from adult males. Many theories have been advanced, but regardless of the reason, they will destroy the babies if given half a chance.

However, in the interest of numerical control, female kittens and, in fact, whole litters for the most part should be chloroformed at birth. If this is done, there is little danger of milk fever developing, but if the milk supply is once stimulated by nursing, it would be well to retain one or two healhy males until they are weaned. Should the breasts of the mother become fevered or caked, warm camphorated oil should be gently massaged into them. Consult a good veterinarian if the condition does not readily respond to this treatment.

An excess dog population is controlled in most areas by a compulsory licensing provision, but careful study, which has been made by experts, points to many difficulties in the way of licensing cats, and it is felt that even though compulsory licensing were put into effect, enforcement would be, for the most part, impossible.

How to Chloroform—The important thing in chloroforming an animal is to induce sleep as quickly as possible without suffocation. Select a well-made box of fair size for the operation. Have ready at least four ounces of chloroform for a grown cat and six for a kitten. Eight or ten ounces will suffice for a whole litter.

Place an old rug flat on the floor and the kittens in the center. Provide a good-sized wad of absorbent cotten or crumple up a piece of soft cloth. Saturate with one-half the chloroform and place it near but not touching the kittens. Quickly place the box over them making sure the edges fit closely upon the rug, and place a heavy weight upon it. In a few minutes following unconsciousness, use the rest of the chloroform. Again press and weigh down the box and do not disturb for an hour or two, or until certain life is extinct.

To shorten the process, kittens may be placed in a pail of water as soon as they lose consciousness completely. Do not remove them for fully one hour, and above all **never bury an animal until rigor mortis has fully developed.**

Type to Choose.—Cats vary in disposition as fully as do human beings, but there are very few that will not respond to right treatment. In beginning with a kitten, it will be found that **kindness will beget confidence.** It gives an air of homelikeness to a house to have

in it a large, sleek, fireside cat who feels the security that all respectable members of a family should feel.

Upon acquiring a cat, allow it time to become well acquainted before permitting it out of doors. Walk around with it a few times until the new surroundings have become familiar. Few are lost if watched carefully the first few days. The first factor to consider should be temperament. In selecting a kitten, best success would be met with in choosing a friendly, bright-eyed animal rather than one which has a tendency to stand aloof and hiss or to cry in fear. These latter characteristics are almost invariably developed by wrong treatment. A normal, well-tempered cat will display keen interest in what his owner is doing. The ears should be erect and slightly forward, and he should not slink away when a hand is extended toward him.

The particular breed or particular type is a matter of personal choice. However, as a general rule, well-bred animals are less even-tempered and less stable than the common variety of short-haired cat.

Training—Cats are normally very clean animals, and are usually easily house-broken. If a kitten or grown cat is given access to the ground outside, no problem exists, but a box of dry dirt, sand, or sawdust will, in all likelihood, take care of any other situation as the animal's instinct directs it to it.

Feeding—Kittens that have just been weaned should be fed four or five small meals daily consisting of fresh meat, preferably beef, raw or partly cooked, fresh fish, milk, and raw eggs. Milk, alone, does not constitute a full diet.

The meals should be very small, half liquid and half solid. All food should be served warm, never hot. A quarter of a teaspoonful of Cod Liver Oil a day should be given. As the kitten advances in age the frequency of meals should decrease, and the amount should increase. An occasional feeding of liver should be given.

When a cat is four months of age he should be receiving two or three meals a day—75% meat or fish, and the other 25% milk. Raw or salt fish should not be fed, and all bones should be carefully removed from the cooked article.

Many cats will eat a limited quantity of vegetables, and while it should be borne in mind that they are carnivorous animals, asparagus, spinach, squash and such foods are beneficial in small quantities. Vegetables should be cooked until they are soft enough to be mashed with a fork. All food should be cut in small pieces.

Fleas—Nature controls fleas by temperature. They cannot exist during the cold months of the year except in some warm part of the house more or less undisturbed by daily cleaning. Successful flea control depends principally upon removing the fleas and nits from the animal by the use, according to directions, of powder containing Derris root or other preparation recommended by a good veterinarian. The treatment must be repeated religiously to avoid reinfestation. The cleansing of the animal and living quarters should take place at the same time. Do not clean the animal and permit it to go to an infested basement or bed.

Fits and convulsions—Fits and convulsions are usually the result of indigestion, inflammation of the ear canals, or at times are associated with infectious enteritis. It is advisable to darken the room and allow the animal to recover unassisted.

When the fit is due to indigestion a twenty-four hour fast, followed by small, frequent meals is recommended. Those cases in which inflamed ears are a factor require several thorough cleanings of the ear canals to effect a cure. This is best done by a veterinarian. In the cases associated with infectious enteritis, the fit usually is but one of the many symptoms that the cat may be showing, necessitating professional advice.

Mange—Mange is a skin condition caused by a microscopic mite that lives and propagates beneath the surface of the skin. It is rather difficult to destroy them with any medicament that is safe to use on the surface of the skin.

Cats are afflicted with three types of mange, namely: Notoedric, Sarcoptic, and Demodectic. In the treatment of any type, one is wise to consult a veterinarian rather than to use a carefully selected preparation which might, but probably would not, effect a cure.

In conclusion, the best advice that can be given is: **feed the cat—give it ordinarily good care,** and it will repay you a thousandfold in service and companionship.

THE AUTOMOBILE IN NEW ENGLAND

	MAINE	NEW HAMPSHIRE	VERMONT
Registration	Expires Dec. 1. May be used until March 1 (except dealers).	Expires April 1.	Expires March 31.
Fees	Passenger: 0-17 h.p. $10; 18-24 h.p. $12; 25-30 h.p. $14; 31 h.p. and over $16. If used for hire or livery, double fee.	Based on weight and tires. Minimum for passenger car $10.	Pleasure cars $12 to $35, depending upon weight.
License	To persons 15 or over $2. Examination required. Expires Dec. 31.	To persons 16 or over. License & examination $3. Expires March 31st midnight. Renewal $2. Chauffeur's license to persons over 18, $5. Renewal $2.	Junior License 16 and 17. Regular License 18 or over $2.50. Examination $2. Expires March 31.
Lights	From half hour after sunset to half hour before sunrise. Must conform to regulations of Sec. of State.	From half hour after sunset to half hour before sunrise. Head lights visible 200 ft. Must have dimmers.	I.C.C. Regulations apply.
Speed	45 mi.; 25 mi. in business & residential districts; 15 mi. by schools. Trucks 40 mi. open country, 12 mi. residential.	15 mi. by schools; 20 mi. business districts, 25 mi. residential and as determined by Commissioner.	Pleasure cars: 50 mi. per hr.; with trailer, 40. Trucks: 1 to 2 tons 35 mi.; over 2 tons, 30. Bus 40 mi.
Non-Residents	Exempt: Pleasure cars registered in owners' state; commercial vehicles not owned by foreign corporations of 1½ tons or less. Cars operated for hire must register.	Pleasure cars used by visitors exempt if registered in owner's state.	Vt. registration and license required for motor vehicles used for transporting people or property for hire.
Trucks	Fees based on capacity and kind of tires, from $10 on 1,000 lbs. or less to $400 for over 12 tons with hard tires.	Based on weight and kind of tires.	Fee 50c. cwt. to 85c. cwt., depending on weight.
Insurance	Proof of financial responsibility required in case of conviction or violation of laws.	Proof of financial responsibility required following accident or conviction of violation of motor vehicle laws.	Financial Responsibility Law applicable following accident (damage over $75.00 or personal injury) or conviction.
Trailers	Must register. MIN. fee $2. House Trailers $5.00 flat rate.	Registration based on weight. Inspection required.	1 trailer or 1 semi-trailer only permitted. Trailer Coach. Safety chain, fire extinguisher required.

Parking Laws and Speed in Various Cities Change Continually

BE ON THE LOOKOUT

THE AUTOMOBILE IN NEW ENGLAND

	MASSACHUSETTS	RHODE ISLAND	CONNECTICUT
Registration	Expires December 31.	Expires December 31.	Expires last day of February.
Fees	Less than 30 h.p. $3. 30-40 h.p. $4.50. 40-50 h.p. $6.00. 50 or more $7.50.	With pneumatic tires minimum fee $8 for gross wt. of 2,500 lbs. or less. Increases with weight. Over 6,000 lbs. $23.	Based on weight — $7.00 to $11.00
License	Any person 16 yrs. or over. Examination fee $2. License fee $2. Renewal fee $2.	To persons 16 or over. Examination $1. License or renewal $2. Valid one year from date of issue.	To persons 16 or over. Fee $3. Examination $2. Expires April 30.
Lights	From half hour after sunset to half hour before sunrise. Front lights must show 160 ft. Rear red light & white light to illuminate registration number.	From half hour after sunset to half hour before sunrise. Headlights must illuminate 200 ft. ahead. Registration number must be illuminated.	Half hour after sunset to half hour before sunrise. Red light in rear, white light to illuminate number plate.
Speed	Reasonable and proper. Prima facie evidence of speed greater than reasonable and proper: over 15 m. per hr. at curves & intersections; over 20 m. in business or residential section; over 30 m. open country.	Reasonable speed at all times. 20 mi. per hr. in thickly settled sections; 35 mi. elsewhere.	Controlled by State Traffic Commission. Maximum 50 mi. per hour, day (40 at night). Watch for posted speeds in special zones on highways.
Non-Residents	Reciprocal. Must carry liability insurance after 30 days.	Reciprocal.	Reciprocity arrangement.
Trucks	Fee: 15c. cwt. of truck and carrying capacity.	Fee based on weight. Minimum for gross wt. of 3,000 lbs. or less $12.50; more than 28,000 lbs. $100. Other than pneumatic tires increase of 10c. per 100 lbs.	30c. cwt. to 50c. cwt. depending on weight.
Insurance	Compulsory. Cannot be registered unless insured to cover personal injuries.	Proof of financial responsibility required in case of conviction of violation of various laws.	Proof of financial responsibility required in case of conviction of violation of various laws.
Trailers	Must register. House and camp trailers $1. Insurance required.	Over 2500 lbs. gross weight must register.	Camp trailers $2.

Parking Laws and Speed in Various Cities Change Continually —
BE ON THE LOOKOUT

THE AUTOMOBILE IN THE MIDDLE ATLANTIC STATES

	NEW YORK	NEW JERSEY	PENNSYLVANIA	DELAWARE	D. C.	MARYLAND	W. VIRGINIA
Registration	Expires December 31 but renewals may be secured during January.	Expires March 31.	Expires March 31, 1940.	Expires December 31.	Expires March 31.	Expires March 31. Plates ensuing year may be displayed March 15.	Expires June 30.
Fees	Private passenger cars 50c. cwt. up to 3500 lbs.; 75c. cwt. for all weight in excess of 3500 lbs.	Private passenger cars 40c. per h.p. up to 29 h.p.; 50c. per h.p. for vehicles of 30 b.p. or over.	Private passenger cars, $10 minimum for 25 b.p. 40c. for each additional h.p. over 25.	$1.50 for every 500 lbs. or fraction thereof up to and including 5,000 lbs.; $2.00 for each 500 lbs. over.	Certificate of title must be obtained. Fee $1. Identification tag at front and rear. Fee depends on weight. Inspection fee 50 cents.	Private passenger cars 32c. per h. p. — quarterly basis.	Private passenger cars $11 up to 2,000 lbs.; 60c. additional for each 100 lbs. or fractions thereof in excess.
License	To persons 18 years or over. Expires 3 years or 1 year from date of issue at option of applicant. Fees: 3 yr. chauf., $5; oper. $2; renewals, chauf. $4; oper. $1.50. 1 yr. chauf., $3; oper. $1; renewals, chauf. $2; oper. 50c.	To persons 17 years and over. Expires March 31. Fee $3.	To persons 16 years or over. Fee $1. Expires January 31. Learners' permits, $2. (Good for ninety days.)	Operator's license to persons 16 or over. Chauffeur's license to persons 18 or over. Fee $1.50. Expires last day of February.	To persons over 16. Operator's permit $3 for period of 3 years.	To persons 16 years or over. Examination permit $1. Operator's license $2; good until suspended or revoked. Chauffeur's license $3; good for twelve months.	To persons 16 years or over. Operator's fee $1; good for four years. Chauffeur's license $3 if issued on or before June 30; $1.50 if issued on or after July 1. Chauffeur's license expires December 31.
Lights	From ½ hr. after sunset to ½ hr. before sunrise. Two white or yellow lights in front; one red light in rear. White light must illuminate rear number plate. Headlights must illuminate 200 ft. ahead.	From ½ hr. after sunset to one-half hour before sunrise. Two front lights; red light in rear. Rear number plate must be illuminated.	From ½ hr. after sunset to ½ hr. before sunrise. Headlights must illuminate objects 350 ft. ahead. Red light in rear. Number plate illuminated with white light.	From one-half hour after sunset to one-half hour before sunrise. Red light in rear; white light to illuminate rear number plate.	From one-half hour after sunset to one-half hour before sunrise. Head lamps must show clearly objects 200 ft. ahead. Red light in rear; number plate illuminated with white light.	Two white headlights. Red light in rear. One spot light permitted. Trucks, commercial vehicles 90 inches wide display clearance lights.	Two front lights — red light in rear.

Speed	Careful and prudent. Over 40 miles per hour presumed not careful and prudent.	Careful at all times. 10 mi. per hr. passing schools; 15 mi. at intersections and curves; 15 mi. business districts; 20 mi. residential; 40 mi. elsewhere.	Careful. 10 mi. per hr. passing street cars and at intersections; 15 mi. by schools; 50 mi. unless otherwise limited.	Reasonable. 25 mi. in business and residential districts; 45 miles on highway.	Reasonable. Must not exceed 7 mi. per hr. in any alley, nor 15 mi. when passing schools; not over 25 mi. on highways unless otherwise indicated.	25 mi. per hr. in business or residential sections; 30 mi. in outlying districts; maximum 50 miles. Dual lane highways: 30- 35- 55 MPH respectively.	Careful. 15 mi. per hr. passing schools; 20 mi. in business districts or at intersections; 25 mi. on suburban streets; 45 mi. on open highways.
Non-Resident	Reciprocal arrangement, except for intrastate transportation for hire or profit. Licensee must be 18 years of age.	Reciprocity arrangement.	Reciprocity arrangement except for vehicles used for transportation of persons for hire.	Reciprocity arrangement, except for vehicles used for transportation of persons for hire.	Reciprocal arrangement.	Reciprocal arrangement, but not to exceed 90 days in year. All "for hire" vehicles must secure insurance permit (gratis) from C.M.V. in Baltimore before entering State. Intrastate operation prohibited.	Reciprocal arrangement, for a period of three months.
Trucks	Fee: 80c. per cwt. of unladen weight.	Fee governed by gross weight of vehicle and load, ranging from $10 for 1000 lbs. or less to $99 for 3000 lbs.	Fee based on chassis weight, number of wheels and type of tires.		Not over 33 ft. long, 8 ft. wide, 12.5 ft. high. 4 wheels not over 28,000 lbs.; 6 or more wheels not over 36,000 lbs. Full reciprocity.	Solid tire vehicles. Fee based on carrying capacity. Speed: 6 tons or less, 25 mi. per hr.; over 6 tons, 20 mi.	Private Commercial: Fee based on capacity of vehicle, ranging from $15 for one ton or less to $540 for 10 tons.
Insurance	For hire passenger cars must be covered by bond or policy filed with Commissioner. Proof of financial responsibility required upon conviction for certain offences.	Proof of financial responsibility required upon conviction for certain offences.	Proof of financial responsibility required of persons with certain accident record and of persons failing to satisfy judgment.	Proof of financial responsibility required when driver is adjudged guilty of certain violations.	Proof of financial responsibility required when driver is adjudged guilty of certain violations.	Required for all commercial vehicles (pass. or prop.) operating "for hire."	Proof of financial responsibility required in cases of violation of motor laws.
Trailers	Semi-trailers, boat-, camping-, coach- and machine-trailers 80c. cwt. of unladen weight. Other trailers $8 per ton of combined weight and carrying capacity.	Same as Trucks. (See above.)	Fee based on chassis and body weight.		See Trucks. No train of vehicles more than 50 ft. long.	Fee based on chassis shipping weight.	Private Commercial: Fee governed by capacity, ranging from $9 for ¼ ton to $540 for 10 tons.

***Parking Laws and Speeds in Various Cities Change Continually* — BE ON THE LOOKOUT!**

POETRY, ANECDOTES AND PLEASANTRIES

SPRING FLORA

Laurence McKinney

The Annual Reports are out,
  The Early Proxy lifts its head,
We push the printed leaves aside,
And see, with fast declining pride,
  The Balauce burgeoning with red.

But wealth we buried in the ground,
  Forgot about, and left unseen,
Returns our interest many fold:
The Crocuses are lined with gold,
  The Jonquil spikes are long and green.

SUNDAY

Elizabeth Coatsworth

This is the day when all through the town
The cats are keeping store.
The men are gone from counter and desk,
The key has locked the door.

But the cats move about with an owner's airs
Over the oranges, apples, and pears,
Or stare from the windows at passers-by
With a calculating but sleepy eye.

In every one of the forty-eight states
The cats do just as they please
From Saturday night to Monday at seven
In a thousand A. & P.'s.

"The New Yorker"

THE NANTUCKET ATTITUDE

A lady summer visitor to Nantucket became very much attached to a resident of the Island, a certain Miss F. After a pleasant companionship lasting several months, when bidding her new found friend farewell the following dialogue took place.

Summer Visitor — "And when are you leaving Nantucket?"

Native Resident — "I, leaving Nantucket; why should I leave?"

Summer Visitor — "But surely you are not planning to stay here all winter?"

Native Resident—"Why not; I live here; just what do you mean?"

Summer Resident—"But do you not get lonely, that is, do you not find it a little remote?"

Native Resident—"Remote from where?"

TO AN 8-INCH HATCHERY TROUT

Don Augur

Prepare yourself, my speckled friend,
  To live for more than liver—
The conservation boys intend
  To plant you in the river.

Farewell the tame, protected run
  Where smaller fry are hatching;
Your class has graduated, son—
  You're big enough for catching.

The slinky mink is on the prowl;
  The otter won't neglect you;
Some guileless-looking waterfowl
  Are plotting to dissect you.

May wisdom ride your dorsal fin
  And laugh at all things vicious,
Including little spoons that spin
  And worms that act suspicious.

But when you've grown to such a size
  As fiction scarce can measure,
Perhaps some day you'll deign to rise
  And let me have the pleasure!

"New York Herald Tribune"

ATMOSPHERIC CONDITIONS

I feel that the lady for whom I repine
Can scarcely be called an oncomer;
I've found in the heart of this sweetheart of mine
The really cool spot of the summer.
This boon I implore of my charmer,
Who couldn't be fairer; be warmer.

"Falmouth Enterprise"

CARION CROW

I do not claim the crow is sainted,
Though far less black than he is painted;
All artists know with play of light
The highlights on a crow gleam white.

For The Old Farmer
by the hired man

REQUIEM

By Ogden Nash

There was a young belle of old Natchez
Whose garments were always in patchez.
When comment arose
On the state of her clothes,
She drawled, When Ah itchez, Ah scratchez!

"I'm a Stranger Here Myself"

HENCH AND WENCH

Barclay Hall

Cupid, reproached for lovers' pains
Has no more conscience than King Kong;
A billion henchmen, he maintains,
And their henchwomen, can't be wrong.

A bow and arrow? Nothing such!
He heaves a golden monkey wrench:
It strips the gear and stalls the clutch—
And how they love it, hench and wench!

Apropos of the present style of feminine head gear, a certain lady had just purchased a spring model at a huge price, the scanty basic framework of which was almost totally obscured with clustered lilies of the valley and ribbon. When she found that she had to attend a funeral and a wedding on the same day she felt some misgivings as to the fitness of the new hat for both occasions so at the last moment bought another more sombre type, temporarily storing the first one in the vestry of the church until after the funeral service. To her consternation and horror, when the coffin came up the aisle she recognized her gayer model in a place of honor on top of the casket which was subsequently, in due course, lowered into the grave.

There is much give and take in a happy marriage but perhaps the chief requisite is to learn "to take it."

Eve has made trouble for Adam ever since God made little apples.

Most monetary clouds have a silver lining.

Some people have a constitutionally slow watch.

THE SHIP'S LADDER

The good ship, Potiphar, lay at anchor in Portsmouth Harbour. An interested spectator observed that a ladder was dangling from her deck; that the bottom four rungs of the ladder were submerged; that each rung was two inches wide and that the rungs were eleven inches apart. The tide was rising at the rate of eighteen inches per hour.

At the end of two hours, how many rungs would be submerged?

WHISKY AND WATER

Two vessels contained equal quantities of whisky and water. A teaspoonful of the whisky was transferred to the vessel containing water. A teaspoonful of the mixture from this vessel was then transferred to the vessel containing whisky.

How does the proportion of water in this vessel now compare with the proportion of whisky in the other?

(Both the above puzzles are taken from, "Brush Up Your Wits," by Hubert Phillips)

Answers to Puzzles

Exactly the same number of rungs as before, as naturally the ladder rose with the ship.

The proportion of water in the whisky is exactly the same as the proportion of whisky in the water.

Answers to Charades

(The answers are printed backwards to prevent seeing others when verifying any one.)

1. Epytnit
2. Worruf
3. Yeknod
4. Thgilyad
5. Nigram
6. Ssaldniw
7. Stelpirt
8. Wercskroc
9. Krowidnah
10. Ecirtakcoc
11. Yhcrana
12. Eetees

THE APPALACHIAN TRAILWAY

By MYRON H. AVERY
Chairman, The Appalachian Trail Conference

Previous issues of the Old Farmer's Almanac (The State of Maine Edition) have described The Appalachian Trail as one of the particular recreational assets of that State. Perhaps, as The Appalachian Trail traverses fourteen states and is becoming better known as an essential part of the recreational opportunities of these states, it may well be described in its entirety. Originally, The Appalachian Trail was a route—a continuous marked footpath extending through the mountain wilderness of the eastern Atlantic States. It was a trail, in the main, along the crest of the Appalachian Ranges, hence it was so named. It extended from Katahdin, in the central Maine wilderness, some 2,050 miles south to the very end of the Blue Ridge Mountains in northern Georgia.

This Trail, a project of the hiking clubs in the eastern United States, federated in The Appalachian Trail Conference, was first begun in 1921. Since 1927 it has been energetically carried forward and in August, 1937, there was initially completed for foot travel only, this route of some 2,050 miles. Originally this project was a mere trail, its distinctiveness lying in its magnitude and the wealth of the varying geological and botanical zones, with all that that means in the way of interest and opportunity, which it traversed. During the last two years, however, The Appalachian Trail has become the thread or backbone of a new and distinct type of recreational area. It is now, in the federally owned lands, a narrow insulated and protected strip set apart solely for those who hike. This condition prevails for approximately 1000 miles of its route. This development, known as The Appalachian Trailway, is indeed a unique thing, of which no similar pattern exists elsewhere. It perhaps deserves some explanation.

The Appalachian Trail was originally a volunteer project carried on by groups associated in The Appalachian Trail Conference with headquarters at Washington, D. C. It is divided into six districts, three representatives from each of which constitute its Board of Managers, or its governing board. At the Conference's eighth biennial meeting held in 1937 in the Great Smoky Mountains National Park, considerable thought was given to a plan for the protection of the Trail. The Trail itself had been completed but how to protect and keep it as such was a question of paramount importance to those who had labored on the project. The solution offered at this meeting developed into what was originally an agreement between the National Park Service and the National Forest Service, executed in October, 1938, creating The Appalachian Trailway. Subsequently, most of the States through which the Trail passes adhered to this agreement. The Appalachian Trailway, as created by these agreements, is a zone of some two miles in width. Within it no paralleling motor roads or other incompatible developments are to be built. Where the Trail is now within a mile of such motor highway, it is to be relocated. A system of shelters is being established along the route of the Trail.

Space does not permit here any detailed review of the Trail route or the history of its development. A series of some five guidebooks describes this 2,050-mile route. For a list of the publications of the Trail Conference which sets forth the various guidebooks and other literature relating to the project issued by The Appalachian Trail Conference, send an addressed, stamped envelope to The Appalachian Trail Conference, 901 Union Trust Building, Washington, D. C.

The insignia of The Appalachian Trail are diamond-shaped markers bearing the familiar A. T. monogram. The main reliance for marking the route, except on graded trails in the National Parks, are white paint blazes placed fore and aft in the direction of travel like highway markers. Side trails are marked by blue paint blazes. Board signs giving distances and termini mark important intersections.

With the development of The Appalachian Trail, there has come a renewed interest in this most ancient of man's recreations. From a mere route for foot travel, The Appalachian Trail has developed into a distinct and unequaled recreational area, set apart for primitive pursuits, as distinctive a part of our social system and unequaled elsewhere as are our National Forests and Parks. Of this super-trail and its wilderness surroundings embodied in The Appalachian Trailway, there has been written:

"Remote for detachment, narrow for chosen company, winding for leisure, lonely for contemplation, the Trail leads not merely north and south but upward to the body, mind and soul of man."

"OH, THE GYPSY LIFE WE'RE LEADING"

(Information largely taken from "The Gypsy Moth in Massachusetts," published by the State Department of Conservation)

The gypsy hordes are still upon us; the little blighters dangle from stalwart oaks as if, for their sins, deservedly strung up to every available limb, a sight which, alas, does not signify the end but rather the beginniug of their uefarious careers. The gypsy is an European Liparid moth which is numerous in Hungary and southern portions of the Continent where there is a higher percentage of deciduous trees which provide more favorable feed. This moth is not so much feared abroad since there are more parasites and more caterpillar disease, also more silvicultural control. Parasites and disease are insufficient checks where feeding conditions are favorable. The gypsy moth was first introduced iuto this country in 1868 by a scientist living in Medford, Mass., who was endeavoring to produce a near-silk worm that would live in this climate by cross-breeding with the genuine silk worm. More thau twenty-five million dollars has been spent by various lcgislatures in attempted eradication of these defoliators. By 1889 they had become abundaut in the Medford-Malden district over an affected area of four huudred square miles. The insect had so decreased by 1900 that it had ceased to be a public nuisance and appropriations were withdrawn. This was a great mistake since by 1905 it had again increased to alarming proportions and had spread over a far larger territory. In 1906 they were discovered in New Hampshire and Rhode Island and appropriations for control of the pest were made by the Federal Government which have been continued anuually since. Outside of New England they have cropped up in Geneva, N. Y., Westchester County, N. Y., Cleveland, Ohio, and in Rutherford and Somerville, N. J. Most of these outbreaks were quelled.

They have been accidently spread over the country transported on nursery stock, young trees, lumber, stone, etc. They have enjoyed rapid transit by motor; more numerous even than other hitchhikers along our highways, these pendant perils are caught up by passing cars and given a free ride to wider geographical distribution.

The sexes differ considerably; the adult female is heavy-bodied, light-colorcd with zigzag marks on the wings; her body is so heavy that she cannot fly. This Bohemian Girl, the flame of the gypsy moth, is astonishingly prolific and, despite the continuous war waged against her offspring, her tribe increases and the scope of its depredations is annually extended. The male is much smaller—of a dark color and flies readily. The winter is passed in the egg stage. The egg clusters number approximately 400 and are deposited on the bark of trees, fence rails, logs, etc. The eggs are laid in July and hatch about the time the leaves begin to appear in the following spring. Their early life is spent in a vernal carousal; so ravenous is their appetite that trces are frequently stripped by the end of June. There is one generation each year. Apple and oak trees suffer most, but many other varieties are attacked, such as gray birch, basswood, alder, willow, river birch, poplar and hawthorn. Pines are vulnerable where mixed with deciduous growth. In the campaign of education the various states have issued illustrated charts—rogues' galleries by which the offenders may be readily identified—showing caterpillars and moths in all stages of growth. These charts are frequently displayed in post offices, town halls and other public buildings.

Where this moth doth corrupt the most effective control, in a largc way, is to spray the verdure with a mixture of powdered arsenate of lead—5 pounds to 100 gallons of water. This treatment cannot well be started before June 1st when the trees are in full leaf, but the caterpillars begin to feed about May 15th. After July 1st most of the damage has been done so there is only the month of June in which to accomplish the spraying. Allowance must be made for wet weather since rain will wash the poison from the leaves; also for windy weather, when it is difficult to do a satisfactory spraying job.

During the autumn and winter egg clusters should be sought out and treated with creosote mixed with coal tar, using a brush with a long handle. Care should be taken to make a thorough job, otherwise the labor is lost. The creosote kills the larvae before spraying can be done and is to be recommended to the individual who cannot afford the expense of spraying. "The Gypsy Moth in Massachusetts," published by the State Department of Conservation, says: "The cost of spraying is very variable and depends on several factors, the chief of which is the distance which it is necessary to traverse in going

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for water to fill the tank. Even under favorable circumstances about half the time is consumed in this operation. . . . Woods that have been thinned, and underbrush cleared, can of course be sprayed much cheaper than woodland uncared for. An abundance of roads, making all woodland easily accessible, reduces the cost by making it possible to reach all sections with a short hose. In general, woodland spraying costs from $10 to $15 per acre, and as much land is valued at less than this amount it is hardly practical to spray the average woodland." These costs apply only to operations carried out on a large scale.

In the case of woodland shade trees, orchards or parks infested by the gypsy moths, the best manner of handling the problem should be determined by some one familiar with the work. An owner of an infested estate should apply to the State Forester to have an examination made by one of his assistants who can give reliable information as to treatment and who, under some conditions, will assume responsibility for seeing that the work is properly carried out.

Another preventive measure is to band the trees with tanglefoot in strips about three inches wide, which will keep the caterpillars from crawling up to the foliage. If egg clusters have been previously treated with creosote and the trees so treated do not stand too close to other untreated trees, banding is an effective measure. When the caterpillars try to ascend they mass below the sticky band and die from starvation or wilt disease. Several adverse conditions may cause the wilt disease to be contracted, but the chief factor appears to be a decrease in the amount of their food or in its nutritive value. This may come about as a result of an over-supply of caterpillars or by their being forced to eat unfavorable food. Warm, moist weather during the feeding season seems to help to spread the disease. Attempts artificially to propagate wilt disease by raising diseased larvae in the laboratory and liberating them have proved unsuccessful; where circumstances were not propitious artificial propagation was of no avail and where favorable the disease appeared of its own account. A thorough attack of wilt disease may reduce a heavy infestation of gypsy moth 80 to 90 per cent in a single season.

Some species of parasites introduced from Europe have proved reasonably effective and a certain predatory beetle—an alien enemy—has assisted in control.

As fortune tellers these gypsies are bad news since all methods of combatting them are expensive and they make large holes in the long green. As to their proclivities for basket-making there is no evidence, but they can do a fine job of lace work in skeleton leaf pattern. In devastated areas along the Gypsy Trail remnants of attenuated foliage lend to our greenery the aspect of an unwholesome second spring.

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each farm is self-sufficient; pork is laid away in the barrel; beef is salted and cured; old-fashioned husking bees are business as well as pleasure; and the old cider jug is still a part of the old social order. There real old New England hospitality still reigns supreme and a welcome is at every door.

And now we look toward the future. While we shall still need large breeding establishments for pure-bred cattle and hens with which to stock our farms, we come more and more to the realization that in the present drift of our complex economy, our agriculture will tend increasingly toward a life of self-sufficiency, as practiced by our forefathers. Once more we shall appreciate the wisdom of the Father of our Country, when he said, "Agriculture is the most healthful, most useful, most noble occupation known to man."

POSTAL RATES.—DOMESTIC.

First Clase Matter may be forwarded from one Poet Office to another without additional poetage, but other matter muet have new postage.

LETTERS AND POSTAL CARDS.—FIRST CLASS.

Written and Typewritten Matter, each ounce and fraction..... .03
(Except when mailed for local delivery when the rate is 2c for each ounce or fraction.)

Post Cards and Private Mailing Cards which comply with Departmental requiremente ..... .01

Business Reply Cards or Letters, consult Post Office.

NEWSPAPERS AND PERIODICALS—SECOND CLASS.

Entire Newspapers or Magazines when mailed by the public; for each two ouncee or fraction, regardless of dietance or weight..... .01

Fourth class rate applies when it ie lower than second claee.

MERCHANDISE AND MISCELLANEOUS.—THIRD CLASS.

(Limit of weight 8 ouncee.)

Merchandise, incomplete copies of newepapere, printed and other mailable matter, each 2 ounces or fraction..... .015

Books, catalogues (must be of 24 or more pages and eubstantially bound, with at least 22 pages printed, seeds, cuttings, bulbs, roote, ecions and plants, 2 ounces or fraction..... .01

Plain Printed Cards containing no writing other than the address, and not conforming with regulation eize of Post Card, ehall be considered Third Class and mailed for ..... .015

Permit Mail. Envelopes, folders, etc., which are to be mailed under Third Class permit privileges ehould indicate the amount of poetage paid.

Bulk Mailings. Applicatione for bulk mailing privilege ehould be submitted to the Post Office.

PARCEL POST.—FOURTH CLASS.

(For Zone consult Post Office)

Everything over 8 ouncee, including books and printed matter, except **First Class** and newspapere and other periodicals entered ae **Second Class** matter mailed by the publishers :—

Table of fourth-clase or parcel-poet ratee

Weight in pounds	Local	ZONES 1st Up to 50 miles	2d 50 to 150 miles	3d 150 to 300 miles	4th 300 to 600 miles	5th 600 to 1,000 miles	6th 1,000 to 1,400 miles	7th 1,400 to 1,800 milee	8th Over 1,800 miles
1	$0.07	$0.08	$0.08	$0.09	$0.10	$0.11	$0.12	$0.14	$0.15
2	.08	.10	.10	.11	.14	.17	.19	.23	.26
3	.08	.11	.11	.13	.17	.22	.26	.32	.37
4	.09	.12	.12	.15	.21	.27	.33	.41	.48
5	.09	.13	.13	.17	.24	.33	.40	.50	.59
6	.10	.14	.14	.19	.28	.38	.47	.59	.70
7	.10	.15	.15	.21	.31	.43	.54	.68	.81
8	.11	.16	.16	.23	.35	.49	.61	.77	.92
9	.11	.17	.17	.25	.38	.54	.68	.86	1.03
10	.12	.18	.18	.27	.42	.59	.75	.95	1.14
11	.12	.19	.19	.29	.45	.64	.82	1.04	1.25
12	.13	.21	.21	.31	.49	.70	.89	1.13	1.36
13	.13	.22	.22	.33	.52	.75	.96	1.22	1.47
14	.14	.23	.23	.35	.56	.80	1.03	1.31	1.58
15	.14	.24	.24	.37	.59	.86	1.10	1.40	1.69
16	.15	.25	.25	.39	.63	.91	1.17	1.49	1.80
17	.15	.26	.26	.41	.66	.96	1.24	1.58	1.91
18	.16	.27	.27	.43	.70	1.02	1.31	1.67	2.02
19	.16	.28	.28	.45	.73	1.07	1.38	1.76	2.13
20	.17	.29	.29	.47	.77	1.12	1.45	1.85	2.24
21	.17	.30	.30	.49	.80	1.17	1.52	1.94	2.35
22	.18	.32	.32	.51	.84	1.23	1.59	2.03	2.46
23	.18	.33	.33	.53	.87	1.28	1.66	2.12	2.57
24	.19	.34	.34	.55	.91	1.33	1.73	2.21	2.68
25	.19	.35	.35	.57	.94	1.39	1.80	2.30	2.79
26	.20	.36	.36	.59	.98	1.44	1.87	2.39	2.90
27	.20	.37	.37	.61	1.01	1.49	1.94	2.48	3.01
28	.21	.38	.38	.63	1.05	1.55	2.01	2.57	3.12
29	.21	.39	.39	.65	1.08	1.60	2.08	2.66	3.23
30	.22	.40	.40	.67	1.12	1.65	2.15	2.75	3.34
31	.22	.41	.41	.69	1.15	1.70	2.22	2.84	3.45
32	.23	.43	.43	.71	1.19	1.76	2.29	2.93	3.56
33	.23	.44	.44	.73	1.22	1.81	2.36	3.02	3.67
34	.24	.45	.45	.75	1.26	1.86	2.43	3.11	3.78
35	.24	.46	.46	.77	1.29	1.92	2.50	3.20	3.89
36	.25	.47	.47	.79	1.33	1.97	2.57	3.29	4.00
37	.25	.48	.48	.81	1.36	2.02	2.64	3.38	4.11
38	.26	.49	.49	.83	1.40	2.08	2.71	3.47	4.22
39	.26	.50	.50	.85	1.43	2.13	2.78	3.56	4.33
40	.27	.51	.51	.87	1.47	2.18	2.85	3.65	4.44
41	.27	.52	.52	.89	1.50	2.23	2.92	3.74	4.55
42	.28	.54	.54	.91	1.54	2.29	2.99	3.83	4.66
43	.28	.55	.55	.93	1.57	2.34	3.06	3.92	4.77
44	.29	.56	.56	.95	1.61	2.39	3.13	4.01	4.88

Weight in pounds	Local	1st Up to 50 miles	2d 50 to 150 miles	3d 150 to 300 miles	4th 300 to 600 miles	5th 600 to 1,000 miles	6th 1,000 to 1,400 miles	7th 1,400 to 1,800 miles	8th Over 1,800 miles
		ZONES							
45	.29	.57	.57	.97	1.64	2.45	3.20	4.10	4.99
46	.30	.58	.58	.99	1.68	2.50	3.27	4.19	5.10
47	.30	.59	.59	1.01	1.71	2.55	3.34	4.28	5.21
48	.31	.60	.60	1.03	1.75	2.61	3.41	4.37	5.32
49	.31	.61	.61	1.05	1.78	2.66	3.48	4.46	5.43
50	.32	.62	.62	1.07	1.82	2.71	3.55	4.55	5.54
51	.32	.63	.63	1.09	1.85	2.76	3.62	4.64	5.65
52	.33	.65	.65	1.11	1.89	2.82	3.69	4.73	5.76
53	.33	.66	.66	1.13	1.92	2.87	3.76	4.82	5.87
54	.34	.67	.67	1.15	1.96	2.92	3.83	4.91	5.98
55	.34	.68	.68	1.17	1.99	2.98	3.90	5.00	6.09
56	.35	.69	.69	1.19	2.03	3.03	3.97	5.09	6.20
57	.35	.70	.70	1.21	2.06	3.08	4.04	5.18	6.31
58	.36	.71	.71	1.23	2.10	3.14	4.11	5.27	6.42
59	.36	.72	.72	1.25	2.13	3.19	4.18	5.36	6.53
60	.37	.73	.73	1.27	2.17	3.24	4.25	5.45	6.64
61	.37	.74	.74	1.29	2.20	3.29	4.32	5.54	6.75
62	.38	.76	.76	1.31	2.24	3.35	4.39	5.63	6.86
63	.38	.77	.77	1.33	2.27	3.40	4.46	5.72	6.97
64	.39	.78	.78	1.35	2.31	3.45	4.53	5.81	7.08
65	.39	.79	.79	1.37	2.34	3.51	4.60	5.90	7.19
66	.40	.80	.80	1.39	2.38	3.56	4.67	5.99	7.30
67	.40	.81	.81	1.41	2.41	3.61	4.74	6.08	7.41
68	.41	.82	.82	1.43	2.45	3.67	4.81	6.17	7.52
69	.41	.83	.83	1.45	2.48	3.72	4.88	6.26	7.63
70	.42	.84	.84	1.47	2.52	3.77	4.95	6.35	7.74

EXCEPTIONS

(a) In the first or second zone, where the distance by the shortest regular practicable mail route is 300 miles or more, the rate is 9 cents for the first pound and 2 cents for each additional pound.

(b) On parcels collected on rural routes the postage is 2 cents less per parcel than shown in the foregoing table when for local delivery and 3 cents less per parcel when for other than local delivery.

(c) Parcels weighing less than 10 pounds measuring over 84 inches, but not more than 100 inches in length and girth combined, are subject to a minimum charge equal to that for a 10-pound parcel for the zone to which addressed.

Limit of size for parcels is 100 inches in length and girth combined. Limit of weight is 70 pounds in all zones.

Library Books. Books containing no advertising matter other than incidental announcements of books. Catalogs over 8 ounces in weight. Special rates of postage are provided for these items. (Inquire at Post Office.)

SPECIAL HANDLING. (Fourth Class Matter Only)

Parcels will receive first-class handling if, in addition to regular postage, there is added—

2 lbs. or less	.10
Over 2 lbs. and not more than 10 lbs.	.15
Over 10 lbs.	.20

SPECIAL DELIVERY FEES

	First Class	Second, Third or Fourth Class
Up to 2 pounds	10c	15c
Over 2 pounds up to 10 pounds	20c	25c
Over 10 pounds	25c	35c

The prepayment of the foregoing fee on second, third, or fourth class mail entitles it to the most expeditious handling and transportation practicable, and also entitles it to special delivery at the office of address.

To Canada: United States Special Delivery Fees are applicable on articles prepaid at the letter rate of postage. Newfoundland and Labrador 20c prepaid in addition to regular postage on letters or articles only prepaid at the letter rate.

REGISTERED MAIL.

Not to exceed $5	$0.15	Not to exceed $500	$0.70
Not to exceed 25	.18	Not to exceed 600	.80
Not to exceed 50	.20	Not to exceed 700	.85
Not to exceed 75	.25	Not to exceed 800	.90
Not to exceed 100	.30	Not to exceed 900	.95
Not to exceed 200	.40	Not to exceed 1000	1.00
Not to exceed 300	.50		
Not to exceed 400	.60		

POSTAL MONEY ORDERS.

For Orders		For Orders	
From $0.01 to $2.50	6 cents	From $20.01 to $40.00	15 cents
From $2.51 to $5.00	8 cents	From $40.01 to $60.00	18 cents
From $5.01 to $10.00	11 cents	From $60.01 to $80.00	20 cents
From $10.01 to $20.00	13 cents	From $80.01 to $100.00	22 cents

POSTAL RATES.—FOREIGN

Letters.—For the places in the following list the postal rate is 3 cents each ounce or fraction. For all other foreign destinations, 5 cents first ounce and 3 cents each additional ounce or fraction: **Andorra (Republic), Argentina, Balearic Islands, Bolivia, Brazil, Canada, Canary Islands, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, Guatemala, Haiti, Honduras (Republic), Labrador, Mexico, Newfoundland, Nicaragua, Panama, Paraguay, Peru, Salvador, El; Spain, including Alhucemas Island, Ceuta, Chafarinas or Zafarani Islands, Melilla, Penon de Velez de la Gomera; Uruguay, Venezuela.**

Post Cards.—Single post cards for places enumerated above 2 cents; maximum size 6x4¼ inches, minimum size 4x2¾ inches. Single post cards for all other foreign destinations 3 cents.

Printed Matter.—1½ cents for each two ounces or fraction. Limit of weight. Inquire at Post Office. (Canada, 4 lbs., 6 oz.)

Samples of merchandise.—For all foreign destinations, 1½ cents each 2 ounces or fraction, with a minimum charge of 3 cents. Limit of weight: 18 ounces.

Commercial papers.—For all foreign destinations, 1½ cents each 2 ounces or fraction, with a minimum charge of 5 cents. Limit of weight 4 lbs., 6 oz.

Maximum dimensions.—For all foreign destinations on all classes of mail noted above (except Post Cards), 36 inches in length, breadth and thickness combined, the length being limited to 24 inches. When sent in the form of a roll the length (the maximum of which is 32 inches) plus twice the diameter is limited to 40 inches.

Registration fee.—For all foreign destinations, 15 cents in addition to postage. When a return receipt is requested there is an additional charge of 5 cents.

INTERNATIONAL PARCEL POST.

International (Foreign) Parcel Post.—For all countries, colonies and places the postage rate is 14 cents a pound. Because of the varying transit charges, surcharges, etc., applicable to most foreign countries, in addition to the regular parcel post rates, it is important that a qualified postal employee handle transactions. Foreign parcel post must not be posted in a letter box; it must be taken to a regular post office and handed to a postal clerk.

POSTAL MONEY ORDERS.—INTERNATIONAL.

Limit of a Single Order, $100.
For Orders from—

$0.01 to $10	10 cents
From $10.01 to $20	20 cents
From $20.01 to $30	30 cents
From $30.01 to $40	40 cents
From $40.01 to $50	50 cents
From $50.01 to $60	60 cents
From $60.01 to $70	70 cents
From $70.01 to $80	80 cents
From $80.01 to $90	90 cents
From $90.01 to $100	1 dollar

AIR MAIL SERVICE.

The rate on Air Mail in the Continental United States is 6 cents for each ounce or fraction thereof. This rate is also applicable to Canada.

The rate to Bahamas, Cuba, Dominican Republic, Haiti, Jamaica, British Virgin Islands, Mexico, Puerto Rico, and Virgin Islands of the United States, is 10 cents for each ½ ounce or fraction thereof.

Tables of Measures

(English Units)

Linear Measure

1 foot=12 inches
1 yard=3 feet
1 rod=5½ yards=16½ feet
1 mile=320 rods=1760 yards=5280 feet
1 nautical mile=6080 feet
1 knot=1 nautical mile per hour
1 furlong=⅛ mile=660 feet=220 yards
1 league=3 miles=24 furlongs
1 fathom=2 yards=6 feet
1 chain=100 links=22 yards
1 link=7.92 inches
1 hand=4 inches
1 span=9 inches

Square Measure

1 square foot=144 square inches
1 sq. yard=9 sq. feet
1 sq. rod=30¼ sq. yards=272¼ sq. ins.
1 acre=160 sq. rods=43560 sq. ft.
1 sq. mile=640 acres=102400 sq. rods
1 sq. rod=625 square links
1 sq. chain=16 square rods
1 acre=10 square chains

Cubic Measure

1 cubic foot=1728 cubic inches
1 cubic yard=27 cu. feet
1 register ton (shipping measure)=100 cubic feet
1 U. S. shipping ton=40 cu. ft.
1 cord=128 cubic feet
1 U. S. liquid gallon=4 quarts=231 cubic inches
1 imperial gal.=1.20 U. S. gals.=0.16 cubic feet
1 board foot=144 cubic inches

(Metric Units)

Linear Measure

1 centimeter=10 millimeters
1 decimeter=10 centimeters
1 meter=10 decimeters
1 dekameter=10 meters
1 hektometer=10 dekameters
1 kilometer=10 hektometers
1 inch=2.54 centimeters
1 meter=39.37 inches
1 yard=0.914 meters
1 mile=1609 meters=1.61 kilometers

Square Measure

1 square centimeter=100 square millimeters
1 sq. decimeter=100 sq. centimeters
1 sq. meter=100 sq. decimeters=1 centar
1 ar=100 centars
1 hektar=100 ars
1 sq. kilometer=100 hektars
1 sq. centimeter=0.15 sq. inches
1 sq. meter=1.20 sq. yards
1 sq. kilometer=0.39 sq. miles
1 hektar=2.47 acres
1 sq. inch=6.45 sq. cm.
1 sq. yard=0.84 sq. m.
1 sq. mile=2.59 sq. km.
1 acre=0.40 hektars

Cubic Measure

1 cubic centimeter=1000 cubic millimeters
1 cu. decimeter=1000 cu. centimeters
1 cu. meter=1000 cu. decimeters
1 cu. yard=0.76 cubic meters
1 cu. meter=1.31 cubic yards
1 liter=1.06 U. S. liquid quarts
1 hektoliter=100 liters=26.42 U. S. liquid gallons
1 U. S. liquid quart=0.94 liters
1 U. S. liquid gallon=3.76 liters

Weights

Avoirdupois

1 pound=16 ounces
1 hundredweight=100 pounds
1 ton=20 hundredweight=2000 pounds
1 long ton=2240 pounds

Troy

(Used in weighing gold, silver, jewels)

1 pennyweight=24 grains
1 ounce=20 pennyweight
1 pound=12 ounces

Apothecaries

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

Metric

1 centigram=10 milligrams
1 decigram=10 centigrams
1 gram=10 decigrams
1 dekagram=10 grams
1 hektogram=10 dekagrams
1 kilogram=10 hektograms
1 metric ton=1000 kilograms
1 kilogram=2.20 pounds
1 pound avoirdupois=0.45 kilograms

MODERN USES OF LIFE INSURANCE AND ANNUITIES

Life insurance is today a household word to millions of people throughout America. They have learned by experience and are justly confident that premiums paid for life insurance during their productive years will return to them, sometimes many fold, at the very time when they are most needed. Perhaps more than any other dollar, the life insurance dollar is used to buy food, clothing, shelter, education—the most precious things money can buy.

Life insurance companies do all in their power to provide policies to cover the many needs contingent upon the life of the individual, whether it be for himself, his family or his business. In doing this, the companies are most anxious to make sure that the policies they issue fulfill the purposes for which they are taken out and they have designed many types of policies and forms of settlements with this aim in view.

Today, life insurance is generally spoken of in terms of income. Thus, a man can guarantee by means of a life insurance policy, that his wife will receive an income, not as long as he lives, but as long as she lives. He can buy an educational policy which in the event of his death, will pay the college expenses of his children as they occur, just as he would have done had he lived. Then again, he can provide through life insurance that he will be able to retire, and that he himself will receive an income for as long as he might live. This income can be so arranged as to be paid jointly to him and his wife and then to the survivor for life.

There are many cases where it is advantageous to have the proceeds of a life insurance policy paid in a single lump sum. Such would be the case where the proceeds are used to pay taxes which become due at the death of the insured. Perhaps, the insurance was purchased for the purpose of establishing a sinking fund, and when the policy matures, the proceeds would then be used to replace a worn machine, an old building or for whatever purpose the fund was established. There are many other reasons for the single sum settlement of life insurance policies—to cancel the mortgage, to pay last illness debts, funeral expenses, outstanding debts, etc.

Although contrary to its original purpose, the life insurance policy is often the backlog of ready cash in an emergency. We think of depressions in terms of the great economic waves which come and go, forgetting that individuals are undergoing economic depressions of their own all the time. At such times, the loan value of the life insurance policy is often the sole remaining asset to tide over the family or save the business.

In recent years, there has been a considerable increase in the popularity of life annuities. A straight life annuity is an investment of capital for the sole benefit of its owner, and it guarantees to him the maximum benefit in the way of income which he can derive from his capital. No individual can predict the date of his death. He cannot, therefore, safely spend more than the income on his principal. If he spends any part of his principal, the income diminishes in proportion and he has no way of so using up his principal that he will be sure his income will last as long as he lives. An annuity provides that income which cannot be outlived. It is the scientific instrument by which a man can derive the maximum benefit to himself in the way of income from his capital.

Annuitants are proverbially longlived. The expectancy of life at age 70 among insured lives, according to the American Men Table of Mortality, is 8.8 years: under the American Annuitant Table, the life expectancy of annuitants at age 70 is 10.38 years in the case of men and 12.23 years in the case of women.

By LESLIE R. MARTIN

The Connecticut Mutual Life Insurance Co.

NEW ENGLAND HURRICANES

By G. HAROLD NOYES

Senior Meteorologist U. S. Weather Bureau, Boston

There is a general weather law that whatever has occurred with great intensity once, may happen again with about the same or even slightly greater force. When this recurrence of a high range of force may happen is wholly unpredictable; it may be a few days later, a week, a month, a century. Every now and then records are broken for all time for some locality, by wind, rain, or temperature; but this is mainly because records of weather are mostly too brief to have covered the major extremes of the various meteorological elements. Thus, in September 1938 a hurricane crossed New England from middle and eastern Long Island, across Connecticut, Massachusetts, the boundary portions of Vermont-New Hampshire, and diminished as it retreated near Burlington, Vermont into Canada. The dynamic force of this storm was recorded by instrumental measurement throughout its New England journey; and it was the most severe ever recorded. Instruments suitable for making such a record have been in common use for about 70 years.

To learn of the power of other similar storms prior to the period of instrumental measurement resort must be had to verbal description and resultant damage, and this method must of necessity be markedly inexact.

We have accounts of a hurricane in September 1821 which crossed eastern North Carolina, New Jersey, New York City, Long Island, Rhode Island, southeastern Connecticut, eastern Massachusetts, and retreated beyond Portland, Maine. Its track was somewhat similar to the 1938 hurricane as far as Long Island, but beyond, their journeys were significantly different. On September 21-22, 1815 a hurricane came northward along the coast, after having caused destruction over Turks Island, and inflicted the most serious storm damage ever known up to that time in New England. From non-technical accounts it seems that the 1815 storm was much like the 1938 storm in its results and probably somewhat similar in the organization of its dynamic forces of generation.

The 1821 storm was terribly destructive in New York, far more so than that in 1938, while in Providence the 1938 storm caused incredibly greater damage than the 1821 storm. The storm wave destruction in Providence in the 1815 hurricane was nearly as severe as in 1938, in general proportion, but there is little conclusive record of the wind damage. In fact, there probably has never been a storm of such destructive severity inflicted upon such great concentration of population and wealth, as the 1938 storm.

Simple arithmetic studies have been made of all hurricanes afflicting the southern United States coasts during the past 50 to 70 years, and the count seems to indicate that a hurricane may cross the Florida coast line on an average of once a year, or in actual count, just under 50 storms in just over 50 years. But if the count is made to specify any one definite spot, the probability lessens to about one chance in ten years over the most vulnerable locations. These most likely locations are in the vicinities of Key West and Pensacola. Along the North Atlantic Florida coast, one damaging hurricane has occurred on the average per 100 miles of coast line about every twenty years or more; although none has occurred in the immediate vicinity of Jacksonville. Toward the northward the decline in probabilities is steadily lower to Cape Hatteras, and beyond that point the hazard decreases to such a low value as is shown by the three storms of 1815, 1821, and 1938.

It is not fitting to ignore a possibility that such a storm might again occur over somewhat nearly the same regions, but it does not seem wise to live in continuing apprehension that such a disaster is imminent. In reality it would be the most simple as well as safe and reassuring thing to do for New England people to forget all about a future possible disaster such as last year's, and to leave it to the weather watchmen of our Government.

RECIPES FROM THE OLD SOUTH

Thoroughly Tested and Highly Approved by

New England Families

PRINCESS SOUP

2 medium-sized onions
¼ cup butter
1 quart chicken stock
½ pint cream
Spanish peppers

Slice onions and fry in butter for two minutes. Take out onions—add chicken stock and cook slowly for 10 minutes. Strain, thicken, add cream, beat and just before taking up put in some Spanish peppers finely chopped.

BALTIMORE OYSTER STEW

1 pint oysters
3 tablespoons butter
½ teaspoon salt
¼ teaspoon Worcestershire sauce
1 quart milk, scalded
Paprika
Dash of pepper

Pick over oysters, remove bits of shell, drain and reserve liquor; add oysters to melted butter, season with salt, pepper and Worcestershire sauce, and cook until oysters are plump and edges begin to curl. Add hot milk and oyster liquor and heat to boiling point. Sprinkle with paprika and serve at once.

CRAB MEAT NORFOLK

1½ cups crab meat
1 cup broiled mushrooms
1 cup white sauce
½ cup rich chicken stock
Dash of cayenne pepper
1 tablespoon of sherry

Mix ingredients and put in greased baking dish. Top with cracker crumbs and bake in moderately hot oven 375° F. for 20 minutes or until brown.

SMOTHERED CHICKEN

2 broilers (2½ lbs. each)
2 tablespoons flour
3 tablespoons butter
2 cups chicken stock
½ cup cream
2 cups thinly sliced onions
½ cup brown sugar
1 small bottle pimento olives, halved

Cut broilers in quarters and place in large casserole. Make sauce of flour browned in butter. Add chicken stock. Cook together and when thickened add cream. Fry onions in brown sugar. When onions have absorbed sugar, add to sauce, also olives. Brown chicken first with butter and a little flour. Put into casserole. Pour sauce over chicken, cover and cook for about an hour, basting regularly.

HAM AND CORN FRITTERS

1½ cups flour
2 teaspoons baking powder
1 teaspoon salt
1 egg, beaten
¾ cup milk
1 cup chopped, cooked corn
3 tablespoons melted butter

Sift together dry ingredients: add milk, eggs, then butter and corn. Make medium sized pancakes and fry in hot butter.

Saute sliced cooked ham in butter until it curls and place 2 small slices on top of 2 medium sized fritters. Serve with butter and parsley sauce.

Sauted, chopped mushrooms may be put on top of ham, and a pile of hot, spiced prunes may be served in center of platter.

CREOLE EGGS

6 hard boiled eggs
½ can (No. 2) tomatoes
4 stalks celery
1 heaping tablespoon butter
1 can mushrooms
1 large onion
1 small cube garlic
1 green pepper
6 slices crisp broiled bacon
12 saltines

Brown onions in butter. Add tomatoes, garlic, celery, green pepper and salt and pepper to taste. Cook very slowly until well done.

Make ½ pint of white sauce. Add to above creole sauce. Then add mushrooms and bacon finely chopped.

Into a greased baking dish put a layer of sliced hard boiled eggs, then a layer of cracker crumbs, then a layer of creole sauce. Repeat. Sprinkle cracker crumbs on top and dot with butter. Bake in hot oven for 10 minutes.

EGGPLANT SOUFFLE

1 medium sized eggplant
1 medium sized onion finely chopped
White of 1 egg, beaten
2 tablespoons melted butter
Salt and pepper to taste

Boil eggplant whole until well done. Scoop out and mash pulp. Add butter, onion, salt and pepper. Then fold in stiffly beaten egg white. Put in casserole, sprinkle with bread crumbs and bake in moderate oven until brown on top.

BANANAS A LA PLANTATION

Cut bananas in halves lengthwise. Put in refrigerator with a little lemon juice over them. When cold and ready to serve, roll in cocoa mixed with granulated sugar. Lay them on a platter, not on top of each other. Serve with or without plain cream.

SOUTHERN BISCUIT

2 cups flour
4 teaspoons baking powder
2 tablespoons Spry
1 teaspoon salt
About ¾ cup milk

Sift dry ingredients. Mix in Spry with fingertips until well mixed. Then add milk, mixing with a knife. Roll out, cut with small cutter and bake in hot over 400° F. until browned.

CHEESE BISCUITS

2 cups flour
4 teaspoons baking powder
1 teaspoon salt
2 tablespoons lard
¾ cup milk
¼ cup water
1½ cups cheese, grated

Sift the flour once before measuring, add baking power and salt and sift together twice.

Put in shortening and cheese. Add liquid slowly and mix with knife to consistency of soft dough. Roll 1/3 inch thick on slightly floured board. Cut with small biscuit cutter. Bake in hot oven (450° F.) 15 minutes. This makes 12 biscuits.

BEATEN BISCUITS

1 cup shortening
4 cups flour
1 teaspoon salt
¾ cup cold water (about)

Cut the shortening into the flour and salt. Mix with cold water to form a stiff dough. Then beat the dough with rolling pin until it blisters, or about 20 minutes. Roll thin. Cut into small biscuits, prick with a fork and bake in very hot oven (475 degrees to 500 degrees) for from 12 to 15 minutes.

THIN CORNMEAL BATTER CAKES

1 cup cornmeal
1 tablespoon flour
1 egg
1 teaspoon salt
Milk to make batter very thin

Scald cornmeal with enough boiling water to dampen well. When cool, sift in flour and salt. Add beaten egg and milk to make thin batter. Beat well. Have griddle very hot and well greased. This makes a cake with a nice crispy edge. Use no baking powder.

ALABAMA SWEET POTATO PIE

1½ cups mashed, hot sweet potatoes
3 eggs, slightly beaten
1/3 cup firmly packed brown sugar
½ teaspoon salt
¼ teaspoon cinnamon
¼ teaspoon ginger
¼ teaspoon allspice
½ cup milk
¼ cup brandy
2 tablespoons butter, melted

Line 8-in. pie plate with pastry. Mix together ingredients in order given; turn into prepared pie plate and bake in hot oven 450° F. 10 minutes; then reduce heat to moderate (350° F.) and bake 25 to 35 minutes longer, or until knife inserted comes out clean.

HEAVENLY HASH

Sweeten, flavor and whip stiff one pint of cream. Add to cream ½ pound of marshmallows cut into small pieces. Set on ice to chill.

Then add ½ pound blanched almonds chopped fine and garnish with maraschino cherries. Line bowl in which cream is put after being whipped, with powdered lady fingers or macaroons.

ORANGE FROMAGE

Yolks of 2 eggs
Grated peel of 1½ oranges
Juice of 1 orange
2 teaspoons sugar
½ pint cream
2 teaspoons dissolved gelatin
A little lemon juice

Put into saucepan eggs, orange peel, orange, and lemon juices, and sugar. Stir over fire until it thickens. Strain and place in refrigerator to cool. Beat cream stiffly and add gelatin. Stir into cooled orange mixture and place in refrigerator until ready to serve.

May be served with cream or sauce of two or three oranges sliced in small pieces, removing pith and pip and making hot syrup of 1 cup sugar and 1 cup orange juice. Pour hot over oranges and let stand in refrigerator until ready to serve.

LACE MOLASSES WAFERS

1 cup molasses
1 cup sugar
1 cup butter

Boil these ingredients one minute, then remove from fire. Then sift together the following:

2 cups flour
1 teaspoon baking powder
½ teaspoon soda

Add this to first mixture and stir well. Let the pan stand in vessel of hot water to keep batter from hardening.

Drop ¼ teaspoon batter three inches apart on buttered baking sheet.

Bake in moderate oven (325° F.) until brown. Cool slightly, then lift off carefully with spatula.

FOOD FOR THE BABY AT ONE YEAR

At one year the average child is allowed a comparatively wide choice of foods. From these, his daily meals should be especially prepared for him. He should not be given "tastes" from adult dishes. Variety is not especially important. Keep the foods simple and wholesome and to a hungry child they will be satisfying. If a child has an appetite he will eat; if not, avoid at all times the forcing of a special food or of a meal. When a new food is given, offer a little. If it is refused, wait a few days and offer it in another form without comment. If any food is persistently refused, speak to your doctor about it, but do not force it through cajoling or telling stories or popping it into his mouth suddenly. Occasionally there is an incapacity to digest some one food and the child automatically refuses it. We do harm by forcing food upon him.

The following outline will give you an idea of the foods which may be included in the dietary of a year-old child. The quantities are not fixed; if you are serving a balanced diet, let a well child decide how much he wants. You need have no anxiety about overfeeding if you offer these foods. Do not give a second or larger helping of any food to the exclusion of others. Give him a second helping of all if he wants it, but not repeatedly of any one food, or he may come to choose that and refuse the others. Salt the food lightly, remembering always that at this age the child's taste is simpler and more delicate than an adult's, requiring no condiment and little seasoning.

Vegetables should be mashed, not sieved. Avoid all soft pastes. End each meal with something which requires chewing, such as crisp dried bread or slices of raw apple, even though you have previously served a soft dessert or stewed fruit.

Illustrative Diet for a Child of 12 to 14 Months

Upon Rising: Unsweetened prune juice, if constipated.

Breakfast: Cooked cereal—½ to ¾ of a cup. Milk to drink and on cereal. Toast or dried bread, with ¼ to ½ teaspoonful of butter. Fruit: baked apple, applesauce or stewed pears.

Mid-Morning: Orange or tomato juice—2 to 3 ounces. Cod-liver oil, one teaspoonful, or equivalent in another form of vitamins A and D.

Dinner: Alternate whole egg, beef juice, crisped bacon, liver paste and scraped beef; minced chicken occasionally. Baked potato or rice. 1 to 2 tablespoonfuls green vegetable—spinach, string beans, peas, onions, asparagus, cabbage, carrots, beet tops. Milk—6 ounces. Dessert: fruit, raw or stewed, custard, junket, or gelatine flavored with fruit juices. Toasted bread. Butter—1 teaspoonful, used in vegetables or on bread. Cod-liver oil—1 teaspoonful or its equivalent.

Mid-Afternoon (*optional*): Raw apple slices or milk to drink not later than two hours before supper. Graham or whole-grain crackers. Food between meals should not be given if it takes away appetite for the next meal.

Supper: Cereal or green vegetables. Milk. Fruit—cooked prunes, pear, apple, peaches. Toast. Cod-liver oil—one teaspoonful or its equivalent.

While your baby may need all the above food, do not be disturbed if he eats less, as many healthy children do not require this much.

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YACHTING ALONG THE NEW ENGLAND COAST

By RICHARD P. WATERS, JR.

Stately clipper ships which once carried New England's name and fame over the Seven Seas have given way today to smaller craft built on racing and cruising lines and the skippers and seamen of former days to yachtsmen, young and old, who still, however, along an ideal coast line, continue the tradition of New Englanders who have gone down to the sea in ships.

These thousands of sailing enthusiasts who launch New England's yachting season in the spring and put up their boats reluctantly in the fall have at their disposal during the beckoning summer months one of the best racing and cruising grounds in the world.

The New England boy or girl who lives by the sea today and does not know how to sail generally feels much like a duck out of water. Sailing rates high in the region's list of popular sports for old and young because of the heritage of the sea and an advantageous coast line.

A small sailboat, 'though it may represent the wealth of the world in the eyes of a youngster, can be built at small cost and repays the investor in dividends of health. Men who inherit the skill of their art construct the large cruising and racing yachts and New England builders are known the world 'round for their workmanship.

The Maine coast line, dotted with harbors located conveniently at the end of each day's sail, has been called truly the paradise for the yachtsman with a cruising boat. Along a rugged shore are snug ports of call which make up for fog, the worst enemy of the cruising man down East. Accurate charts of rocks and shoals are available for the navigator who has charge of guiding the ship along a varied and interesting coast.

The coastal areas of Massachusetts Bay provide splendid racing grounds for small boats and its most famous yachting port, Marblehead, Mecca of yachtsmen during celebrated Mid-Summer Week, sends a racing fleet of some 400 daily to the starting line during this highlight event on the New England yachting calendar.

Any yachtsman will argue on the merit of favorite regions for sailing but the supporters of Buzzards Bay as the best place to set to sea emphasize sporty waters and a prevailing southwesterly sailing breeze. The landlocked harbors and bays of this area hold ever increasing yachting fleets. Further off shore lie Vineyard and Nantucket Sounds, friendly playgrounds to the cruising man, while Martha's Vineyard and Nantucket Island each sport harbors full of racing craft. To the Southwest on the mainland wait such famous harbors as Newport, R. I., home port for the J boats in the America's Cup series, and New London, Conn., starting point for cruises each year after the Harvard-Yale crew races.

With a seaboard such as this, it is little wonder that New England youngsters often learn to sail before they can even swim. This is an actual practice, although frowned on by the conservative members of many a "rocking chair fleet," for boys and girls of five and six don life-jackets and clamber aboard tiny sailing craft in many a port for harbor racing under supervision. There are "Rookies" at Cohasset and "Brutal Beasts" at Marblehead and similar small boats in hundreds of ports which carry many a future commodore who now "goes down to the sea in a life-jacket."

The young yachtsman later graduates into the junior yacht racing circles and finally, there are the Inter-Scholastic and Inter-Collegiate Yacht Racing Associations with each playing its part in bringing the young yachtsman along to proficiency in the art of a well-organized sport.

It is impossible to estimate the number of sailing craft that ply New England waters every summer or the number of yachtsmen who man them but it has been calculated that New Englanders spend approximately $5,000,000 in putting their boats, including power craft, into commission each spring.

In recent years, the trend has been away from large power and sailing boats toward small cruising and racing craft. Yachting, also called the King of Sports and the Sport of Kings, has broadened its field and can now be done, as has been said, "in shirt-sleeves."

Its popularity has grown steadily in the last decade but its most serious setback occurred during the hurricane of September, 1938, when the elements played no favorites and yachts of all types were destroyed by a phenomenal wind and sea.

COURTS IN NEW ENGLAND

Below are given the names of the places where the different Court Records are kept in the custody of the Clerks of Court, Registers of Probate or other such officers.

United States—First and Second Circuits.

First Circuit. Circuit Court of Appeals at Boston;—District Court of Maine at Portland;—of Massachusetts at Boston;—of New Hampshire at Concord;—of Rhode Island at Providence.

Second Circuit. Circuit of Appeals at New York City;—District Court of Vermont at Burlington;—of Connecticut at New Haven and Hartford;—Northern District of New York at Utica;—Eastern District of New York at Brooklyn;—Southern District of New York at New York City;—Western District of New York at Buffalo.

Maine.

The Supreme Judicial Court holds eight Law Terms, four at Augusta and four at Portland. This is the Court of last resort. It also meets in the several counties for Equity and other matters as occasion requires. The Superior Court which is a Circuit Court holds terms in the sixteen counties of the State, terms comprising a minimum of two in Lincoln, Piscataquis and Hancock and a maximum of ten in Cumberland County.

Superior Court convenes in the following places: Androscoggin County at Auburn, Aroostook County at Houlton or Caribou, Cumberland County at Portland, Franklin County at Farmington, Hancock County at Ellsworth, Kennebec County at Augusta, Knox County at Rockland, Lincoln County at Wiscasset, Oxford County at South Paris or Rumford, Penobscot County at Bangor, Piscataquis County at Dover-Foxcroft, Sagadahoc County at Bath, Somerset County at Skowhegan, Waldo County at Belfast, Washington County at Machias or Calais, and York County at Alfred.

Superior Court is a trial court. Clerks of the Supreme Judicial Courts in the several counties are also Clerks of the Superior Court.

Probate Courts are County Courts and meet in the County seat of each county.

New Hampshire.

Supreme Court at Concord;—Superior Court and Probate Courts:—Rockingham Co. at Exeter;—Strafford Co. at Dover;—Belknap Co. at Laconia;—Carroll Co. at Ossipee;—Merrimack Co. at Concord;—Hillsborough Co. at Nashua and Manchester;—Cheshire Co. at Keene;—Sullivan Co. at Newport;—Grafton Co. at Woodsville;—Coos Co. at Lancaster.

Vermont.

Supreme Court: Montpelier;—County Court and Court of Chancery:—Addison Co. at Middlebury;—Bennington Co. at Bennington;—Caledonia Co. at St. Johnsbury;—Chittenden Co. at Burlington;—Essex Co. at Guildhall;—Franklin Co. at St. Albans;—Grand Isle Co. at North Hero;—Lamoille Co. at Hyde Park;—Orange Co. at Chelsea;—Orleans Co. at Newport;—Rutland Co. at Rutland;—Washington Co. at Montpelier;—Windham Co. at Brattleboro;—Windsor Co. at Woodstock. Probate Courts:—Where the Probate District consists of an entire County its records are in the same places above. Other Probate records as follows:—Addison Dist. at Middlebury;—New Haven Dist. at Vergennes;—Bennington Dist. at Bennington;—Manchester Dist. at Manchester;—Bradford Dist. at Wells River;—Randolph Dist. at Chelsea;—Rutland Dist. at Rutland;—Fairhaven Dist. at Fair Haven;—Marlboro Dist. at Brattleboro;—Westminster Dist. at Bellows Falls;—Windsor Dist. at Ludlow;—Hartford Dist. at Woodstock. The records of each Probate District are in the custody of its Judge of Probate.

Massachusetts.

Supreme Judicial Court for the Commonwealth at Boston. Supreme Judicial Court, Superior Court, and Probate Courts:—Barnstable Co. at Barnstable;—Berkshire Co. at Pittsfield;—Bristol Co. at Taunton;—Dukes Co. at Edgartown, (see below);—Essex Co. at Salem;—Franklin Co. at Greenfield:—Hampden Co. at Springfield;—Hampshire Co. at Northampton;—Middlesex Co. at Cambridge;—Nantucket Co. at Nantucket, (see below);—Norfolk Co. at Dedham;—Plymouth Co. at Plymouth;—Suffolk Co. at Boston;—Worcester Co. at Worcester;—except that in the County of Nantucket, cases which are to be heard by one justice of the Supreme Judicial Court shall be entered, tried and determined at the court held in the county of Bristol; and in the county of Dukes County, cases which are to be heard by one justice of the Supreme Judicial Court shall be tried and determined at the court held for the county of Bristol, but the records and papers shall be entered and kept in the county of Dukes County and transferred for purposes of hearing as may be required. All matters cognizable by the full court arising in either of the counties of Dukes County or Nantucket shall be heard and determined as if arising in the county of Bristol.

Rhode Island.

Supreme Court at Providence. Superior Court:—Providence and Bristol Counties at Providence;—Kent Co. at East Greenwich;—Washington Co. at South Kingstown;—Newport Co. at Newport. In each City and Town there is a Court having Probate jurisdiction within its limits. In towns which have not elected a Judge of Probate the Town Councils act as Probate Courts.

Connecticut.

Supreme Court of Errors:—All sessions at Hartford. Superior Court:—Hartford

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COURTS IN MIDDLE ATLANTIC STATES

NEW YORK

Court of Appeals. This is the court of last resort, with appellate jurisdiction only. It sits at Albany for one term each year, holding sessions of four weeks each, with intervening recesses usually of one or two weeks, except in the summer when a recess is usually taken from the latter part of June to the first Monday of October. In 1846 this court succeeded the Court for the Trial of Impeachments and Correction of Errors. The records of this former court, the records of the former Court of Chancery, and those of the Supreme Court prior to 1847, are all deposited in the office of the Court of Appeals at Albany.

Supreme Court. This is the court of general jurisdiction in law and equity, subject to the limited appellate jurisdiction of the Court of Appeals. For judicial election purposes the state is divided into nine judicial districts, each district comprising certain counties. For administrative purposes, the state is divided into four judicial departments, each department comprising certain of the judicial districts. Each department has its Appellate Division of the Supreme Court. The location of the court house for each Appellate Division is as follows: First Department, at Madison Square, New York City; Second Department at Borough Hall, Brooklyn; Third Department at Albany; Fourth Department, at Rochester.

In the Supreme Court legal and equitable matters are heard at separate times; legal disputes at Trial Terms and equitable disputes at Special Terms.

NEW JERSEY

Supreme Court convenes at Trenton third Tuesday of January, first Tuesday in May and October.

Court of Errors at Trenton first Tuesday in February, third Tuesday in May and October.

Pardons at Trenton first Tuesday in April and September.

U. S. District Court at Trenton third Tuesday in January and second Tuesday in September; at Newark first Tuesday in April and first Tuesday in November; at Camden second Tuesday in May and first Tuesday in December.

PENNSYLVANIA

Supreme Court: At Philadelphia, Eastern District comprising counties of Adams, Bedford, Berks, Blair, Bradford, Bucks, Cameron, Carbon, Centre, Chester, Clearfield, Clinton, Columbia, Crawford, Cumberland, Delaware, Elk, Franklin, Huntingdon, Juniata, Lackawanna, Lancaster, Lebanon, Lehigh, Luzerne, Lycoming, McKean, Monroe, Montgomery, Montour, Northampton, Northumberland, Perry, Philadelphia, Pike, Potter, Schuylkill, Snyder, Sullivan, Susquehanna, Tioga, Union, Warren, Wayne, Wyoming. At Pittsburgh, Western District, comprising counties of Allegheny, Armstrong, Beaver, Butler, Cambria, Clarion, Erie, Fayette, Forest, Greene, Indiana, Jefferson, Lawrence, Mercer, Somerset, Venango, Washington, Westmoreland. At Harrisburg, Middle District, comprising the counties of Dauphin, Fulton, Mifflin, York.

Superior Court: At Philadelphia, counties of Bedford, Berks, Blair, Bradford, Bucks, Carbon, Centre, Clearfield, Clinton, Chester, Delaware, Franklin, Fulton, Huntingdon, Lancaster, Lebanon, Lehigh, Lycoming, McKean, Montgomery, Montour, Northampton, Northumberland, Philadelphia, Potter, Schuylkill, Sullivan. At Scranton, counties of Columbia, Lackawanna, Luzerne, Monroe, Pike, Susquehanna, Wayne, Wyoming. At Harrisburg, counties of Adams, Cameron, Cumberland, Dauphin, Elk, Juniata, Mifflin, Perry, Snyder, Tioga, Union, York. At Pittsburgh, counties of Allegheny, Armstrong, Beaver, Butler, Cambria, Clarion, Crawford, Erie, Fayette, Forest, Greene, Indiana, Jefferson, Lawrence, Mercer, Somerset, Venango, Warren, Washington, Westmoreland.

DELAWARE

Supreme Court:—All sessions at Dover.

Court of Chancery, Superior Court, Court of General Session, Common Pleas Court, and Probate Court:—At Dover, Kent Co.; at Wilmington, New Castle Co.; at Georgetown, Sussex Co.

DISTRICT OF COLUMBIA

The following courts are located in Washington, D. C.:—Supreme Court of the United States; United States Court of Appeals for the District of Columbia; United States Court of Customs and Patent Appeals; Court of Claims of the United States; District Court of the United States for the District of Columbia; Municipal Court; Police Court; Juvenile Court.

MARYLAND

Court of Appeals sits at Annapolis for three terms each year. The first term begins on the second Monday in January; second term begins on the first Monday in April; third term begins on the first Monday in October.

WEST VIRGINIA

Supreme Court of Appeals. This is the court of last resort, with appellate and original jurisdiction (in certain classes of cases). It sits at Charleston, for two regular terms each year, beginning on the second Wednesday in January and the first Wednesday in September. Special terms are held on the warrant of three judges.

SUPREME COURT OF THE UNITED STATES

The Constitution divides the Government into three branches, Congress, the Legislative branch in which was vested the power to legislate on certain specific and limited subjects—the only subjects which the people in the several States in 1787 and 1788 were willing to place under control of the National Government; the Executive branch, vesting the executive power in a President with certain express provisions and limitations as to the exercise of that power; and the Judicial branch, giving the Judicial power to a Supreme Court and such inferior courts as Congress should establish.

The Supreme Court consists of a Chief Justice and eight Associate Justices. The personnel of the present Court is as follows:

Chief Justice, Charles Evans Hughes.

Associate Justices, James Clark McReynolds, Pierce Butler, Harlan Fiske Stone, Owen J. Roberts, Hugo L. Black, Stanley Reed, Felix Frankfurter, William O. Douglas.

Courts in New England *(Continued)*

Co. at Hartford and at New Britain for naturalization only; — New Haven Co. at New Haven, Waterbury and Meriden; — Fairfield Co. at Bridgeport and at Danbury;—New London Co. at Norwich and New London—Litchfield Co. at Winsted, Litchfield, New Milford and Torrington;—Middlesex Co. at Middletown;—Windham Co. at Willimantic and Putnam;—Tolland Co. at Rockville. Courts of Common Pleas for such Counties as have these Courts are as follows:—Hartford Co. at Hartford;—New Haven Co. at New Haven;—Fairfield Co. at Bridgeport;—New London Co. at Norwich;—Litchfield Co. at Litchfield and Common Pleas Court, for Waterbury Judicial District at Waterbury. There are 113 Probate Districts;—84 of these Districts consist of one town only; each of the remaining Districts comprises more than one town. The records of each District are in the custody of its Judge of Probate.

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The one thing above all others needed in the hurricane area is the application of weeding treatments during the next ten to fifteen years, when the young, volunteer stands are in the sapling stage. The early favoring and freeing of the most promising crop trees, of both pine and hardwoods, through the control of weed trees will serve to start the development of fine forests which will far surpass the majority of those destroyed by the hurricane.

Meanwhile the woodland owner should make every effort to clean up highly inflammable slash in order to protect the new volunteer stand of sprouts and seedlings. In this he may be assisted by the WPA, the CCC camps or the Forest Service camps without cost to himself. Through the Government's Agricultural Conservation Program any owner may receive benefit payments for slash disposal, at the rate of $4 per acre up to a total of $60. Under this same program farmers may obtain financial aid in such forestry work as planting and weeding. And the extension forester of each state is prepared to give advice in woodland management to all who seek it.

With so much material public aid available, woodland owners in the hurricane area have an unequaled opportunity to start the practice of forestry on a sound and scientific basis.

STATE ELECTIONS AND HOLIDAYS

NEW ENGLAND STATES

In all the New England States, Legislatures and Governors are now elected every second year. The next elections will be in 1940. All these elections are on the Tuesday next after the first Monday in November, except that in Maine, which is on the second Monday in September.

HOLIDAYS

The following days are legal Holidays. If the day falls on Sunday the day following is usually kept as a Holiday. Thanksgiving and Fast are appointed by State or National authority.

Maine. Jan. 1, Feb. 22, Apr. 19, May 30, July 4, 1st Mon. Sept., State Election Day, Nov. 11, Thanksgiving and Christmas. **New Hampshire.** Jan. 1, Feb. 22, 3rd or 4th Thurs. April, May 30, July 4, 1st. Mon. Sept., Oct. 12, Nov. Election Day, Nov. 11, Thanksgiving and Christmas. **Vermont.** Jan. 1, Feb. 12, Feb. 22, May 30, July 4, Aug. 16, 1st Mon. Sept., Oct. 12, Nov. 11, Thanksgiving and Christmas. **Massachusetts.** Jan. 1, Feb. 22, Apr. 19, May 30, June 17 in Suffolk Co. only, July 4, 1st Mon. Sept., Oct. 12, Nov. 11, Thanksgiving and Christmas. **Rhode Island.** Jan. 1, Feb. 22, May 4, May 30, July 4, 1st Mon. Sept., Oct. 12, Nov. Election Day, Nov. 11, Thanksgiving and Christmas. **Connecticut.** Jan. 1, Feb. 12, Feb. 22, Fast, May 30, July 4, 1st Mon. Sept., Oct. 12, Nov. 11, Thanksgiving and Christmas.

MIDDLE ATLANTIC STATES

The General Election Day in all the Middle Atlantic States is the Tuesday next after the first Monday in November.

New York. Governor elected for four years, Senators for two years, Assembly Members for two years. Election annually.

New Jersey. Governor elected for three years, Senators for three years, Assembly Members for one year. Election annually.

Pennsylvania. Governor elected for four years, Senators for four years, Representatives for two years. Next election in 1940.

Delaware. Governor elected for four years, Senators for four years, Representatives for two years. Next election in 1940.

District of Columbia: Governed by a Board of three Commissioners, two of whom are appointed by the President of the United States for a term of three years; third member is an officer of the Engineer Corps of the U. S. Army detailed by the President. Congress legislates for the District of Columbia. Each House of Congress has a Committee on the District of Columbia.

Maryland. Governor elected for four years, Senators for four years, Representatives for four years.

West Virginia. Governor elected for four years, Senators for four years, and members of House of Delegates for two years.

LEGISLATURES IN MIDDLE ATLANTIC STATES

SESSIONS COMMENCE AS FOLLOWS:

New York—First Wednesday in January, each year.

New Jersey—Second Tuesday in January, each year.

Pennsylvania—First Tuesday in January, 1941, and each alternate year.

Delaware—First Tuesday in January, 1941, and each alternate year.

Maryland—First Wednesday in January, 1941, and each alternate year.

West Virginia—Second Wednesday in January, 1941, and each alternate year.

HOLIDAYS

The following days are legal Holidays. If the day falls on Sunday the day following is usually kept as a Holiday. Thanksgiving and Good Friday are appointed by State or National authority.

New York. Jan. 1, Feb. 12, Feb. 22, May 30, July 4, 1st Mon. Sept., Oct. 12, 1st Tues. after 1st Mon. of Nov., Nov. 11, Thanksgiving and Christmas. **New Jersey.** Jan. 1, Feb. 12, Feb. 22, Good Friday, May 30, July 4, 1st Mon. Sept., Oct. 12, 1st Tues. after 1st Mon. of Nov., Nov. 11, Thanksgiving and Christmas. **Pennsylvania.** Jan. 1, Feb. 12, Feb. 22, Good Friday, May 30, June 14, July 4, 1st Mon. Sept., Oct. 12, 1st Tues. after 1st Mon. of Nov., Nov. 11, Thanksgiving and Christmas, and every Saturday from 12 o'clock noon to 12 o'clock midnight.

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FISHING TODAY

Of late years salt water fishing along the New England coast appears to be decidedly on the mend; striped bass have come back strong while mackerel and bluefish, if not quite of the old school, have been sufficiently numerous to afford good sport. In the last decade anglers have been employing rod and reel in the capture of much larger fish than they would have formerly thought of tackling with such gear; giant tuna and even porpoises and swordfish have been landed by this method. Even international competitions have been held when American anglers have vied with those of other countries in skill. On another page Mr. B. Davis Crowninshield, one of the foremost American salt water anglers, supplies some special information on this branch of sport. The special trains for fishermen which are now being run are significant as an indication of enthusiasm as well as opportunity.

In ponds, lakes and fresh water streams the increased drain upon the natural supply of game fish, in a day when motor transportation renders the more remote waters accessible, is being partially handled by restocking with hatchery bred fish in different States with varying success. Replenishing of the trout supply presents perhaps the most difficult problem, but the Fish Commissioners in many cases are doing an excellent job with intelligent methods of conservation, combined with the introduction of the Western rainbow trout and the imported German brown trout of Europe. Landlocked salmon also have been artificially reared and extensively distributed throughout appropriate waters. There are few rivers in the United States which can now offer sea salmon fishing.

Window displays of fishing tackle in sporting goods shops constitute the earliest spring outburst, with a premature fly time as accompaniment; the multiplicity of patterns is annually augmented to the bewilderment of the eager angler. Every season brings forth innovations in the form and manner of tying these flies. A recent catalogue features a reversed type, having the hackle wound at the bend of the hook instead of the eye, which may prove a more effective lure provided the trout can make head or tail of it. Nymph fishing has acquired a tremendous vogue with the resultant further experiments in the realm of entomology. Many tender-hearted anglers now employ barbless hooks which would seem a kinder, if less firm, variety. We understand that a synthetic leader is now made by the du Pont Company.

More and more is the accent being placed upon fine tackle and delicate methods though Mr. Ray Bergman, in his recent book, "Trout," admits there is a time and a place for heavier gut with large sized flies. The dry fly manner, in a sense a superficial method, is widely practiced and fishermen who use both wet and dry fly require a double supply. Perhaps hatchery reared fish afford a special problem; the trout bred in a hatchery and nourished on a liver diet is muddled on biology and totally in the dark as to entomology. An eminent angler tells me that he has found the silver-bodied Montreal to be the best fly for liver-fed trout because the sheen of the silver brings them up to investigate, whereupon they recognize their old friend.

On certain waters there is a limit placed as regards the number of fish to be retained, less than the legal number allowed to be caught, and many fishermen voluntarily return practically all of their catch, which is a sportsmanlike tendency. Indeed the old-time expression, "a nice basket of fish," is today almost obsolete; a creel full of trout is an anachronism except in wilderness fishing. After all is not the supreme thrill in angling the moment when the fish strikes and is hooked? In our opinion that instant provides greater excitement than the subsequent struggle and landing of the victim and is even more enjoyable than exhibiting one's catch to an admiring and envious group.

A new idea is the "Solunar Theory" which postulates a tidal pull, present though immeasurable in fresh water, which exerts an influence upon the appetite of trout. In accordance with this theory tables have been constructed showing at just what hour the fish should be on the feed for any given locality on a certain date. We are unable to deny that there may be something in the idea but, reduced to absurdity, its basic truth should hold for every goldfish in the globe.

The sport of fishing is popular with all classes; a certain janitor of our acquaintance, a kin spirit, was ever wont to greet us on the first mild day in May with the understanding query, "Have you had your feet wet yet?" The great increase in the number of club waters and wholesale posting of streams sometimes causes concern for the future angling chances of the proletariat under Democracy.

In these times our streams are subject to severe late season droughts which are an additional menace to the survival of trout. We are inclined to forget two factors which greatly affect the total number of fish taken in a season; first, long periods of unpropitious weather and second, the insect pests, black fly, gnats and mosquitoes which at times become so unbearable as to drive the angler away from the stream.

Few pastimes are deeper rooted in our affections than is angling. Which of us cannot well remember his first trout, whether it rose to the fly or stooped to the worm? In the calendar of the devout fisherman, what is more sacred than the:

FIRST SUNDAY AFTER OPENING DAY

We shirk all duties,
All our home ties sever;
A string of beauties
Is a joy forever.

No fisherman or gunner is ever properly equipped for a projected outing unless provided with the requisite license which can be procured from town clerks and county officials; duck stamps can be purchased at any post office for one dollar. Two prime obligations are: Safety First and Prevention of Forest Fires.

SHOOTING TODAY

The sport of gunning may be divided into three classes, big game hunting, duck shooting, and upland bird shooting. Big game in the eastern portion of the United States is pretty well limited to deer and bear, unless we included fox and wild-cat under this heading. Bear are rarely encountered except in Maine, New York, Pennsylvania, and perhaps in Florida, in the vicinity of the Everglades. Moose are protected and caribou have vanished. Not long ago at the close of the open season, game statistics showed that there had been more bear killed that year in Pennsylvania than in five mountainous states of the west combined. Deer are very numerous in certain states, particularly in New York and Pennsylvania, probably more so than in Indian days. It is estimated that there are 200,000 in the Adirondacks alone. In many regions they are encroaching on civilization and have become a nuisance to farmers and gardeners. In New Jersey they have seriously damaged the cranberry and blueberry crops. This surprising increase is due in part to intelligent conservation methods, but also to the prohibiting of the use of hounds in the pursuit of deer. The army of deer hunters outnumbers even the deer, and decked out with red self-protecting coloring they present an impressive array; during the weeks of the deer season red caps are as omnipresent in the autumn woods as in our railway stations.

The duck situation is far less favorable; destruction of feeding grounds by drainage of marsh lands, combined with too much shooting, has greatly diminished the supply, and though they are still plentiful in certain localities, such localities are fewer and further between. Protective laws have become more and more stringent in the last decade and now it has been found necessary to remove various breeds entirely from the game list on account of scarcity. The Federal Government has taken over the duck legislation and open seasons are determined by zones, with later seasons for the more southern latitudes.

Luckily a ray of hope appears in the organization known as "Ducks Unlimited" which comes nobly to the rescue. This movement now has the co-operation of forty states and of Canada where most of the duck breeding grounds are situated. It is hoped that breeding tracts in Canada of 1,000,000 acres will be ultimately acquired. New England hunters will be especially benefited as the southward flights follow the Atlantic coast.

Shore bird shooting has been outlawed for many years by international agreement in which Canada has joined. Wilson Snipe, commonly known as Jack Snipe, may still be shot for the duration of the duck season.

In upland bird shooting we are concerned with quail, woodcock, partridges and pheasants. Just as the angler inclines to the use of finer tackle, the modern gunner shows a tendency to employ smaller calibre of shotguns; many sportsmen limit themselves to a 20-gauge and a few to a 28-gauge. Again there is a parallel to the trout situation in the introduction of foreign species to augment the supply of game birds. The English pheasant is now well established and bids fair to fill a real place in the list; such a large bird requires much food and special planting is frequently required in order to nourish these aliens. Experiments with Hungarian partridge do not seem thus far to have been very successful, and at present an attempt is being made to set out an Indian partridge which is said to possess a most delicious flavor.

The recent popularity of skeet has probably stimulated an interest in shooting in general, and has doubtless resulted in recruiting new sportsmen in the field, but the two sports differ widely and it is debatable whether practise at the skeet game is of great value in making a good brush shot, and vice versa; those who excel at the one do not necessarily qualify at the other.

Except in the southern and western states quail shooting is practically a thing of the past; Cape Cod, on account of its mild winter climate, still boasts a few quail, but their numbers are steadily decreasing despite the meager limit of 4 per day and 20 in a season.

That little fly-by-night, the woodcock, appears to be holding its own with a limit of 4 and 20.

The partridge, or ruffled grouse, is a mysterious bird and the supply is subject to great fluctuation which occur apparently in cycles; it is therefore hard to say whether or not they are definitely on the decline. Probably their situation is comparable to that of wild fowl, plentiful in some localities but considerably thinned out in many of their former haunts. We are rather pessimistic of the future as regards partridges anywhere south of the White Mountains.

Until comparatively recently it was believed that grouse could not be propagated in captivity but of late years experiments along this line have been carried on with some measure of success

Posting of shooting lands is becoming very general, but this practise is less liable to interfere with the partridge hunter whose quarry inhabits wilder country often distant from civilization.

We hear little today of the old-time sport of coon hunting, at least insofar as the northern states are concerned, where its popularity seems to have waned. There are still many rabbit hunters and many rabbits. The gray squirrel appears to persist and thrive, largely on account of his agility in dodging around a tree. Perhaps the wild turkey should be classed as big game; they are still occasionally encountered in the southern states and a few survive as far north as Pennsylvania, Maryland, and the Virginias, but we suspect that most of the so-called wild turkeys have a generous admixture of barnyard stock, and in some cases they are merely tame turkeys run wild.

Often the sportsman softens with age and finds himself becoming a bit chicken-hearted with regard to killing birds and takes to the camera or to working his bird dogs without a gun, just for the exercise and pleasure of being in the woods. This attitude may be briefly expressed as follows:

Who would autumnal beauty mar
Must answer for a lot;
The gun-man in his murder car,
With Bob White on the spot.

TUNA FISHING OFF THE MASSACHUSETTS COAST

By B. DAVIS CROWNINSHIELD

Five years ago New England commercial fishermen knew tuna chiefly as "hoss mack'rel" and cursed them roundly for the thousands of dollars' worth of damage which they caused annually to pound nets, trawls and seines. Now the situation is entirely changed and the pesky "hoss mack'rel" of a few years ago has come into its own as the big bluefin tuna, that powerful blue and silver torpedo of the ocean game fish lanes, a prize widely sought and gamely fought by New England's newest legion of sportsmen, the deep sea rod and reel anglers.

If cut by a horizontal plane passed through the tuna at about the line of that neat seam which the Creator has sewn in the side of fish of this species the lower half of the resultant figure would closely resemble a modern racing hull and there is adequate horse power in the propelling tail.

Rod and reel fishing for tuna is not a new sport everywhere since the first fish was taken by angling methods on the Pacific coast back in the gay nineties but those early days of sport tuna fishing were confined to a handful of pioneers who could afford the time and expensive tackle necessary to conquer these fighting giants. Since then the sport has steadily spread over the world circle of this fish's range. The famous Catalina Tuna Club was the first headquarters and later the fisherman of the eastern and western Atlantic ports tried their hand at tuna fishing and found it good. As the pastime grew in popularity the cost came down until today rod and reel angling for tuna is within the reach of the average sportsman; charter boats are available and it is no longer necessary for one to own his own boat and his own rod and tackle. The commercial fishermen who formerly damned the tuna for interfering with their more prosaic trade have rigged their boats for taking out salt water anglers and make a profit both ways.

Annisquam is an ideal fishing ground being but an hour and a half's run from Boston by automobile and also accessible by train. There is an excellent harbor with all facilities, including a weighing-out dock. Last season many enthusiasts came down in the afternoon, after business hours, and had good success before sundown. It is a beautiful spot, bounded by a sandy stretch of beach on the west and a high rock-bound coast on the east, and for many years tuna have been in the habit of frequenting this bay. Five years ago no one ever thought of attempting the capture of these ocean visitors but now, on a week-end, thirty or more boats may be seen.

Tuna may be found in the vicinity of Provincetown also where many are annually taken commercially and scattered fish are to be encountered almost anywhere through Massachusetts Bay. Provincetown is practically virgin territory for the angler but I feel that in a short time tremendous catches will be made there. With tuna abounding in the waters of Massachusetts, one is afforded ample opportunity for a grand day's sport and during the months of July and August, with prevailing wind in the southwest, one is able to get off shore almost at will.

Brute strength and stamina are no longer essential for tuna fishing since, with the new technique of handling the boats and the greatly improved tackle, the average person will prove equal to the physical test. Only last summer the ladies' record was twice broken with good catches in excellent time.

Residents of Massachusetts are fortunate today in having such opportunities for sport so close at hand which are probably not excelled anywhere on the Atlantic seacoast.

WALL AND ROOF INSULATION

If we too rarely realize the amount of heat that is lost through our windows, we are even less conscious of the amount that is lost through walls and roofs. As a matter of fact, it is not unlikely that if escaping heat were visible, as steam is about the loosely fitting cover of a saucepan, we would, no doubt, be all but dumbfounded at what we would see. As a matter of fact, the heat generated by approximately one ton out of every five tons of coal you burn, or one gallon out of every five of the oil you use, goes, without exaggeration, straight through your roof, unless, of course, you have seen to it that insulation is in the way.

Thus roof insulation is really important, and wall insulation is as well. If your house has no insulation, it is not likely that you will care to install it in your walls. To be done well, such a job requires experienced help. If, however, you have an open attic, there is no reason why you cannot install insulation there, for the task is, in such a case, very simple indeed.

The principal difficulty you will experience will probably be caused by the necessity for choosing among the scores of excellent products manufactured for the purpose. These are, however, divided into five major types.

First, there are sheets not greatly different in size from sheets of plasterboard, but vastly different in construction. Plasterboard is not to be considered an insulator at all. Other "boards" of different construction and greater thickness, however, sometimes are.

Second, there are rolls and packages of materials, some of which are not so very different in appearance from the wool "batts" that your grandmother used to put in her finest "comfortables," but are made of especially processed vegetable fibers. These are mounted between heavy sheets of paper or not, according to the manufacturer's own ideas.

Third, one can obtain bags of loose, light materials that can be poured out between the joists of an unfloored attic, and spread several inches thick upon the laths of the ceiling below.

Fourth, there are compressed materials, such as cork and various fibers. These come in slabs of varying thicknesses and sizes. They are usually excellent.

Fifth, there are aluminum covered sheets of paper. The metal surface of this type of insulator is polished aluminum foil which reflects the heat.

Your own individual needs and the good salesmanship of your dealer will undoubtedly determine which of these types is to be used. Remember, however, that you will never want to be forced to insulate your roof again, so do not buy any of them merely because they are cheap.

If your attic has no floor it is probable that you will select the kind of insulating material that is to be poured between the joists. If your attic has a floor this type cannot readily be used. Consequently you will have to choose between those designed to go overhead. Some of these cover the rafters and some are fastened between them; either kind is usually easy to apply.

If you plan to install any finished rooms in your attic it is almost vital that the roof be insulated. And in such a case it is the roof, and not the upper side of the ceiling below, that should be insulated.

For those who wish to install their own insulation the manufacturers of insulating materials have prepared pamphlets or folders giving, in detail, the instructions for their application. So varied are these materials and so diverse are the methods of use and the possibilities they offer that it will invariably be best for the home craftsman to follow the instructions of the manufacturer whose product he buys. That there are degrees of excellence (and, in some cases, lack of it) in insulating materials is true enough. Your dealer, however, should be able to aid you in making a wise selection. Beyond that point, the instructions of the manufacturer will serve every need.

A few points may, however, be useful in the selection of insulating material:

1. It should be fireproof or fire-resistant.
2. It should not serve as a harboring place for insects or rodents.
3. It should be proof against or resistant to moisture.

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INSPIRATION FOR YOUTH DRAWN FROM HISTORY

Extract from Baccalaureate Sermon by GEORGE B. CUTTEN President of Colgate University

Your most valuable asset is your youth; youth teems with indiscretions and is side-tracked by inexperience, but, after all, it has its irrepressible enthusiasms, its adventurous schemes, and its redundant vigor, assets which time alone can dull, and the passing of the decades alone can erase. If these can be properly harnessed and skillfully guided, the world and its rewards are dangling before you.

The younger Pitt became prime minister of England at twenty-five. Palmerston was Secretary of State for War at twenty-five, a position he held for twenty years under six different prime ministers. Gladstone entered Parliament at twenty-one, was first Junior Lord of the Treasury at twenty-three, and a month later became Under-Secretary of State for the colonies, at thirty-one he was in the cabinet. Alexander the Great became king when a youth of twenty; at twenty-two he gained his first great victory over the Persians; at twenty-three he again defeated them; at twenty-five, with fifty thousand soldiers, he overcame a Persian army of one million. Before his death at the age of thirty-two, he is said to have wept because there were no more worlds to conquer. Napoleon commanded France's army at twenty-six, and at twenty-seven the army of Italy: at twenty-eight he conquered Austria, and at thirty he was ruler of France. Alexander Hamilton was a lieutenant-colonel on Washington's staff at twenty, a framer of the Constitution at thirty, and Secretary of the Treasury at thirty-two. James Wolfe was a lieutenant-colonel at twenty-three, hero of Louisburg at thirty-one, and conqueror of Quebec at thirty-two. Clive was described by Pitt as the youth of twenty-seven who has done the deeds of a heaven-born general. Marlborough was a French colonel at twenty-four and an English colonel at twenty-eight. The youngest colonel of the British Army during the Great War was Lieutenant-Colonel Eric McDonald of the Canadian Expeditionary Force, who commanded the 10th Alberta Battalion during the last year of the war, when twenty-five.

Hyde became president of Bowdoin at twenty-seven. Robert M. Hutchins was made secretary of Yale at twenty-four, dean of Yale Law School at twenty-eight, and president of the University of Chicago at thirty. At thirty-four, Mark Hopkins became president of Williams, and Clarence Little of the University of Maine; at thirty-seven he was president of Michigan. At thirty-five Eliot went to Harvard, White to Cornell, and Harper to Chicago.

Among men of letters, Byron published his first volume of poems at nineteen, and the first two cantos of Childe Harold at twenty-four; Disraeli published Vivina Gray at twenty-two, Dickens published Pickwick Papers at twenty-four, and Shelley wrote Queen Mab at twenty-one. Noah Webster published his spelling-book, grammar and reading-book at twenty-five.

In the field of invention youth has been eminent. George Westinghouse invented the air brake when twenty-two, Luther Burbank produced the potato which bears his name when twenty-two. George Eastman produced dry plates at twenty-six. Alexander Bell invented the telephone when twenty-eight, Henry Ford produced his first motor car at twenty-nine. Thomas Edison invented the incandescent lamp when thirty-two, and the Wright brothers were thirty-two and thirty-six when they made their first flight.

In business we have some examples of early genius. Rudolph Spreckles became president of the Hawaiian Commercial and Sugar Company at twenty-two, and put the plantation on a paying basis within a year. C. S. Woolworth established his first five and ten cent store when twenty-four. John D. Rockefeller organized the Standard Oil Company when thirty-one, and at the same age John Wanamaker opened his department store.

This list of eminent youth might be greatly prolonged, but we refrain and leave it to you to add your own names. Waiting for age to sharpen the wits and develop the necessary maturity has ever been a procrastinator's fallacy. The age in which you live is calling for your help now and presenting opportunities in number far in excess of any past age and you cannot ask it to wait. With all the venturesome enthusiasm which your youth provides, force yourselves into the strife, and contribute your strength to accomplish the marvels which your time not only demands, but sorely needs.

PRESIDENT, VICE-PRESIDENT AND CABINET

President .....Franklin Delano Roosevelt .....New York
Vice-President .....John Nance Garner .....Texas

Members of the Cabinet: Secretary of State, Cordell Hull, Tennessee; Secretary of the Treasury, Henry Morgenthau, Jr., New York; Secretary of War, Harry H. Woodring, Kansas; Attorney General, Frank Murphy, Michigan; Postmaster General, James A. Farley, New York; Acting Secretary of the Navy, Charles Edison, New Jersey; Secretary of the Interior, Harold L. Ickes, Illinois; Secretary of Agriculture, Henry A. Wallace, Iowa; Secretary of Commerce, Harry L. Hopkins, New York; Secretary of Labor, Miss Frances Perkins, New York.

PRESIDENTS OF THE UNITED STATES

No. and Name	Politics	Native State	Born	In-aug.	Age at Inaug.	Date of Death	Age at Death
1. George Washington.....	Fed.	Va.	1732, Feb. 22	1789	57	1799, Dec. 14	67
2. John Adams.....	Fed.	Mass.	1735, Oct. 30	1797	61	1826, July 4	90
3. Thomas Jefferson.....	Rep.	Va.	1743, Apr. 13	1801	57	1826, July 4	83
4. James Madison.....	Rep.	Va.	1751, Mar. 16	1809	57	1836, June 28	85
5. James Monroe.....	Rep.	Va.	1758, Apr. 28	1817	58	1831, July 4	73
6. John Quincy Adams.....	Rep.	Mass.	1767, July 11	1825	57	1848, Feb 23	80
7. Andrew Jackson.....	Dem.	N. C.	1767, Mar. 15	1829	61	1845, June 8	78
8. Martin Van Buren.....	Dem.	N. Y.	1782, Dec. 5	1837	54	1862, July 24	79
9. William Henry Harrison...	Whig	Va.	1773, Feb. 9	1841	68	1841, Apr. 4	68
10. John Tyler.....	Dem.	Va.	1790, Mar. 29	1841	51	1862, Jan. 17	71
11. James Knox Polk.....	Dem.	N. C.	1795, Nov. 2	1845	49	1849, June 15	53
12. Zachary Taylor.....	Whig	Va.	1784, Nov. 24	1849	64	1850, July 9	65
13. Millard Fillmore.....	Whig	N. Y.	1800, Jan. 7	1850	50	1874, Mar. 8	74
14. Franklin Pierce.....	Dem.	N. H.	1804, Nov. 23	1853	48	1869, Oct. 8	64
15. James Buchanan.....	Dem.	Pa.	1791, Apr. 23	1857	65	1868, June 1	77
16. Abraham Lincoln.....	Rep.	Ky.	1809, Feb. 12	1861	52	1865, Apr. 15	56
17. Andrew Johnson.....	Rep.	N. C.	1808, Dec. 29	1865	56	1875, July 31	66
18. Ulysses Simpson Grant....	Rep.	Ohio	1822, Apr. 27	1869	46	1885, July 23	63
19. Rutherford Birchard Hayes	Rep.	Ohio	1822, Oct. 4	1877	54	1893, Jan. 17	70
20. James Abram Garfield.....	Rep.	Ohio	1831, Nov. 19	1881	49	1881, Sept. 19	49
21. Chester Alan Arthur.....	Rep.	Vt.	1830, Oct. 5	1881	50	1886, Nov. 18	56
22. Grover Cleveland.....	Dem.	N. J.	1837, Mar. 18	1885	47	1908, June 24	71
23. Benjamin Harrison.....	Rep.	Ohio	1833, Aug. 20	1889	55	1901, Mar. 13	67
24. Grover Cleveland.....	Dem.	N. J.	1837, Mar. 18	1893	55	1908, June 24	71
25. William McKinley.....	Rep.	Ohio	1843, Jan. 29	1897	54	1901, Sept. 14	58
26. Theodore Roosevelt.....	Rep.	N. Y.	1858, Oct. 27	1901	42	1919, Jan. 6	61
27. William Howard Taft.....	Rep.	Ohio	1857, Sept. 8	1909	51	1930, Mar. 8	72
28. Woodrow Wilson.....	Dem.	Va.	1856, Dec. 28	1913	56	1924, Feb. 3	67
29. Warren Gamaliel Harding..	Rep.	Ohio	1865, Nov. 2	1921	55	1923, Aug. 2	58
30. Calvin Coolidge.....	Rep.	Vt.	1872, July 4	1923	51	1933, Jan. 5	60
31. Herbert Clark Hoover.....	Rep.	Iowa	1874, Aug. 10	1929	54	.....	..
32. Franklin Delano Roosevelt	Dem.	N. Y.	1882, Jan. 30	1933	51	.....	..

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Delaware. Jan. 1, Feb. 12, Feb. 22, Good Friday, May 30, July 4, 1st Mon. Sept., Sept. 28 (schools only—Birthday of Frances E. Willard), Oct. 12, 1st Tues. after 1st Mon. of Nov., Nov. 11, Thanksgiving and Christmas, and every Saturday after 12 o'clock noon. **District of Columbia.** Jan. 1, Feb. 22, May 30, July 4, 1st Mon. Sept., Nov. 11, Thanksgiving, Christmas, and every Saturday after 12 o'clock noon, and every fourth year the day of the inauguration of the President. **Maryland.** Jan. 1, Feb. 22, March 25, Good Friday, May 30, July 4, 1st Mon. Sept., Sept. 12, Oct. 12, Nov. 11, Dec. 25 and all days of general and congressional elections throughout the State. **West Virginia.** Jan. 1, Feb. 12, Feb. 22, May 30, June 20, July 4, 1st Mon. Sept., Oct. 12, Nov. 11, last Thurs. Nov., Dec. 25 and National, State or other election day.

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Donnelly Adv.

HOUSEHOLD HINTS

A piece of gauze bandage sometimes makes a better backing for a darn than heavier material.

The curved blade of a grapefrnit knife is excellent for loosening the edge of desserts which are to be nnmoulded or loosening muffins from the tin.

A strip of sandpaper held firmly against a screw top may provide enough friction to loosen it.

If yonr favorite tablecloth needs darning, rip the hem and ravel threads from the edge to nse in the darn. With careful work the mend may not show at all.

When washing silk stockings it pays to roll them in a bath towel and sqneeze gently to remove part of the moisture. They are less likely to show streaks on drying and keep their shape better.

An interesting picture pasted to the bottom of the glass (color next the glass) may help the child who dawdles over his milk to finish it off so that he can see the pictnre.

Before washing a new swcater or children's woolens cnt a piece of heavy paper in the shape and size of the garment. After washing, absorb as much of the moistnre as you can by rolling and sqneezing gently in a bath towel, lay the garment on the pattern and coax it into the right shape to finish drying.

Milk glasses shonld be rinsed in cold water before putting them into soapy water.

It is easier to wash the meat grinder if a piece of dry bread or a cracker is gronnd throngh before taking it apart.

A piece of inner tube is a safe and effective material to shut in a door which rattles annoyingly at night.

A cigarette burn on a table can be made less noticeable if the spot is rubbed down with steel wool and finished with furniture polish.

When covering an ironing board, tack the cover on while it is damp. It will be tight and smooth when dry.

Boiled fish will be whiter if a little vinegar or lemon juice is added to the watcr before cookir g.

If you are settling down for a long day at the sewing machine it pays to cover the treadle with a piece of carpet to keep your foot from slipping.

The juice from a jar of sweet pickles is excellent for use in French dressing.

A light scorch stain on white silk can be removed by covering it for an hour or so with bicarbonate of soda mixed to a pastc with cold water. Brnsh off when dry.

It pays to dust off a grater with a dry brnsh before pntting it into the dish water.

If late starting thc roast for dinner, sear it under the broiler while the oven is heating.

If the bread is too fresh for cutting nicely for sandwiches put it in the refrigerator until it gets thoroughly cold, and yon will have no trouble.

Use adhesive tape for labelling tin cans in which to storc cereals and other food in the pantry. Namcs can be put on in ink and will not come off in the washing.

Stains made by chewing gum can be removed with carbon tetrachloride.

If the children lose the tin tabs off their shoe strings point the end and dip it in melted sealing wax.

It is often convenient to know that a quarter of a cup of cocoa can be used in place of a square of chocolate in cakes and cookies if two tablespoons of flour are omitted.

A rubber band around cach arm of a dress-hanger will keep a thin dress from slipping.

If the pattern for cutting a patch-work quilt is made of sand paper the pattern will stay in place on the cloth without slipping.

FOURTEEN POINTS IN ORNAMENTAL TREE PLANTING

1. A piece of burlap or canvas should be spread over the grass, so that the dirt from the holes may be thrown upon it, or use a wheelbarrow from which it is easy to shovel the dirt.

2. Holes must be made large enough so that the roots may be spread out naturally without cramping.

3. Be sure the holes are well drained, especially when dug in a clay subsoil.

4. Good, fertile top soil must be used about the roots. If the planting location is in impoverished ground, good soil should be provided about the roots.

5. Plant the tree about the same depth it stood at the nursery (easily determined by the dirt ring on the trunk). This is very important.

6. Lay the roots out naturally and cut off smoothly all the broken or bruised parts.

7. Press the earth down firmly embedding all parts of roots and working it in under the crown.

8. With small trees the dirt will settle about the roots if the plant is moved gently up and down and the earth firmed as the hole is filled. Be careful not to break the rootlets. With large trees use tamping stick.

9. Pour in water to top of hole after filling three-quarters full with earth. When this is settled complete filling-in process, leaving top soil loose. Do not hill up the earth about the base of the tree.

10. Trim broken or bruised branches, also small branches and limbs back to the next largest stem.

11. Do not cut back the leader or central stem, as a forked tree may result. Hardwood trees, oak and beech especially, should not have their central leader cut off.

12. Large trees or trees in exposed places should usually be staked. To prevent chafing, protect the tree with old rubber hose or with burlap. A stake driven in the ground alongside the tree with a rubber or burlap covered wire attached to the tree is a good support. Until the tree becomes firmly established see to it in the spring that the earth is closely packed about the trunk.

13. After planting, it is better to leave a cultivated area about the tree than to sod close to it. This cultivated area should be from 3 to 5 feet in diameter.

14. Fertilizer or well rotted manure or compost may be used either thoroughly mixed with the soil in the bottom of the hole or as a surface mulch, or both.

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INDEX

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Force	Description	Statute Miles Per Hour
0	Calm	0 to 3
1	Light air	3 to 8
2	Light breeze	8 to 13
3	Gentle breeze	13 to 18
4	Moderate breeze	18 to 23
5	Fresh breeze	23 to 28
6	Strong breeze	28 to 34
7	Moderate gale	34 to 40
8	Fresh gale	40 to 48
9	Strong gale	48 to 56
10	Whole gale	56 to 65
11	Storm	65 to 75
12	Hurricane	75 and over

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