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ARBORE DAY

The following are the names of the
individuals who have been
selected to represent the
various departments of the
University of California
in the celebration of
Arboreal Day.

1903
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ROBERT W. FLETCHER

University of California
Arboreal Day

1903

ARBOR DAY.

"Yon sturdy oak, whose branches wide
Boldly the storms and wind defy,
Not long ago an acorn, small,
Lay dormant 'neath the summer sky."

"We but gather the thoughts of others,
only the threads that unite are ours."

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EDITED AND COMPILED BY

ROBERT W. FURNAS.

LINCOLN, NEB.:
STATE JOURNAL COMPANY, PRINTERS.
1888.

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Respectfully dedicated to

HON. J. STERLING MORTON.

Author of Arbor Day.

PREFACE.

Perhaps no observance ever sprung so suddenly and almost universally into use in the higher ranks of life as that of Arbor Day. The name itself attracts, and at once secures fast hold on refined, intelligent people. The thought originated with one who worships at the shrine of home and its endearing relations. The presentation of its simple origin, history, progress, and evidence of appreciation, has induced the publication of this volume.

ARBOR DAY.

ITS ORIGIN.

HAT is now known almost throughout the civilized world as "Arbor Day," originated in Nebraska. At an annual meeting of the Nebraska State Board of Agriculture, held in the city of Lincoln, Jan. 4, 1872, the Hon. J. Sterling Morton, of Nebraska City, introduced the following resolution, which was unanimously adopted, after some little debate as to the name, some present contending for the term "Sylvan" instead of "Arbor":

"Resolved, That Wednesday, the 10th day of April, 1872, be and the same is hereby especially set apart and consecrated for tree planting in the state of Nebraska, and the State Board of Agriculture hereby name it Arbor Day; and, to urge upon the people of the state the vital importance of tree planting, hereby offer a special premium of one hundred dollars to the agricultural society of that county in Nebraska which shall, upon that day, plant properly the largest number of trees; and a farm library of twenty-five dollars' worth of books to that person who,

on that day, shall plant properly in Nebraska the greatest number of trees."

Mr. J. T. Allan offered the following resolution, which was also adopted unanimously :

"Resolved, That the newspapers of the state be requested by the State Board of Agriculture to keep the resolution in regard to the anniversary day for tree planting standing in their columns until April 10th next, and to call especial attention of the people to the importance of the matter from time to time."

The newspapers of the State were generous, and kept Arbor Day well before the people. The result was that over a million trees were planted in Nebraska on the first Arbor Day, April 10th, 1872. The day was again observed in 1873 with increased interest and results.

March 31st, 1874, the first Arbor Day proclamation was issued by the governor :

ARBOR DAY.

A PROCLAMATION BY THE GOVERNOR OF THE STATE OF NEBRASKA.

WHEREAS, The Nebraska State Board of Agriculture, at its January meeting, 1874, adopted the following resolutions :

Resolved, That the second Wednesday of April of each year be and the same is hereby designated, dedicated, and set apart as "Arbor Day" for the state of Nebraska, and

that the agriculturists of Nebraska be requested to petition the legislature to make said Arbor Day a legal holiday. That until so made a holiday the governor be requested to call attention to said "Arbor Day," by proclamation, and request the whole people of the state to observe it, by planting forest, fruit, or ornamental trees.

And, WHEREAS, I have been officially notified by the president of said board, and by him requested to comply therewith,

NOW, THEREFORE, I, Robert W. Furnas, governor of the state of Nebraska, do hereby publicly proclaim the aforesaid transactions of the State Board of Agriculture, and both respectfully and urgently recommend that the day designated, viz., the 8th day of April, 1874, be observed by the people of this state, as desired and expressed in the resolution herein referred to.

IN TESTIMONY WHEREOF, I have here-
unto set my hand and caused the
great seal of the state of Nebraska
to be affixed on the 31st day of
March, A.D. 1874.

ROBT. W. FURNAS.

By the Governor:

JOHN J. GOSPER,

Secretary of State.

It was generally observed in all parts of the state, and millions of trees were planted on that day. Annually thereafter, other governors followed this example, until at the session of the legislature in the winter of 1885, the following act was passed, designating the 22d of April in each year as Arbor Day, and making it one of the legal holidays :

SEC. 8. [Days to be observed as holidays.] — That the following days, to-wit, the first day of January, February twenty-second, and *the twenty-second of April, which shall be known as 'Arbor Day,'* the twenty-fifth day of December, the thirtieth day of May, and July fourth, and any day appointed or recommended by the governor of this state, or the president of the United States, as a day of fast or thanksgiving, and when any one of these days shall occur on Sunday, *then the Monday following* shall, for all purposes whatsoever as regards the presenting for payment or acceptance, and the protesting and giving notice of the dishonor of bills of exchange, bank checks, or promissory notes, made after the passage of this act, be deemed public holidays, and be treated and considered as is the first day of the week, commonly called Sunday. *Provided,* That when any one of these days shall occur on Monday, any bill of exchange, bank check, or promissory note, made after the passage of this act, which but for this act would fall due and be payable

on such Monday, shall become due and be payable on the day thereafter.

STATUTORY ENACTMENTS.

Since the inauguration of Arbor Day, liberal (both constitutional and statutory) provisions have been made in Nebraska. A clause in the existing constitution provides, "That the increased value of lands by reason of live fences, fruit and forest trees grown and cultivated thereon, shall not be taken into account in the assessment thereof."

The following statutory enactments are now in existence (Chapter 2, Agriculture):

SEC. 3. That the corporate authorities of the cities and villages of the state of Nebraska shall cause shade trees to be planted along the streets thereof.

SEC. 4. For the above purpose a tax of not less than one dollar, nor more than five dollars, in addition to all other taxes, shall be levied upon each lot adjacent to which the trees are to be planted as aforesaid and collected as other taxes.

SEC. 5. Trees shall be annually planted, when practicable, on each side of one-fourth of the streets in each city and village in the state of Nebraska, until all shall have shade trees along them not more than twenty feet apart.

SEC. 6. The corporate authorities aforesaid shall provide by ordinance the distance from the side of the street that trees shall be planted, and the size thereof.

SEC. 7. Provided, the owner of any lot or lots may plant trees adjacent thereto where ordered as above, in the manner and of the size prescribed, and on making proof thereof by affidavit to the collector, said affidavit shall exempt said owner from the payment of the aforesaid tax.

SEC. 8. Any person who shall materially injure or shall destroy the shade tree or trees of another, or permit his animals to injure or destroy them, shall be liable to a fine of not less than five dollars, nor more than fifty dollars, for each tree thus injured or destroyed, which fine shall be collected on complaint of any person or persons before any court of proper jurisdiction. One-half of all fines thus collected shall be paid to the owner of the trees injured or destroyed ; the other half shall be paid into the school fund.

SEC. 9. That this act shall not apply to any person that is occupant of any business lot without his consent.

SEC. 10. That when any person shall plant and properly cultivate for the term of five years, six rows of trees, eight feet apart, and the trees four feet apart in the row, along either the north section or the half section line, running east and west, said rows to be not nearer to the said north section or half section line than four feet or to

the south line of any road which may be laid out on said north section or half section line; or when any person shall fill out to the standard above prescribed, and keep the same in a proper state of cultivation for the time above stated, any rows of trees that may have previously been planted along said north section or said half section line, it shall be the duty of the county commissioners to pay to such person, by warrant on the county treasurer, a sum of money, amounting to three dollars and thirty-three cents per acre, for each acre so planted and cultivated annually, so long as the same is planted and kept growing and in a proper state of cultivation, for a period not to exceed the space of five years, and to an extent not to exceed three acres of land.

SEC. 11. It shall be the duty of the assessor of each precinct to make proper examination, and report to the county commissioners at the time of his annual report, the condition of all timber so planted and cultivated under the provisions of this act.

PREMIUMS.—The State Board of Agriculture gives premiums annually as follows:

For the greatest number of trees planted on Arbor Day, to include fruit, forest, evergreen, and all varieties.....	\$50
Second best	25
Greatest number hard wood.....	25
Greatest number cuttings.....	10

A large proportion of the schools in the state annually observe "Arbor Day" by planting trees, shrubs, vines, and flowers. Much of it is "memorial" planting, accompanied with interesting literary exercises.

Statistics show there have been planted in Nebraska since Arbor Day was instituted 355,229,919 forest trees, fruit and shade trees, and grape vines in cities and villages.

To show the probable extent of tree planting in Nebraska the spring of 1888, mention is made of the business of three firms in the state—and there are a large number of smaller operators. These three firms had orders for over 10,000,000 forest tree seedlings. One of the firms had contracts for planting 3,500,000 of forest trees. There are nine U. S. land districts in Nebraska. In one land district there were known to be 11,000 tree claims, requiring 27,000 trees planted to the claim. Say then, there were 99,000 tree claims in the nine districts, multiplied by 27,000, and we have 2,673,000,000. This gives a rough approximation of tree planting in the "Great American Desert," west of the Missouri River—the "New West."

ARBOR DAY ISSUE OF THE "PRAIRIE
FARMER."

April 7, 1888, the *Prairie Farmer*, Chicago, Ill., then under the management of the veteran agricultural editor, ORANGE JUDD, issued the number of that date devoted exclusively to "Arbor Day." From it the following excerpts are made. The editor introduced the subject by saying :

"Our readers are to be congratulated on having in this week's issue so vast an amount of highly useful, practical, and timely information, which has been gathered with much labor and correspondence, and will be found through the entire paper. This information, furnished by many able contributors, is not only of special value in this tree planting season, but will be useful at all seasons. Indeed, in comprehensiveness and completeness, this number is equivalent to a volume on the subject. It is designed more especially for the states in the broad Mississippi valley, from Ohio and Michigan to the Rocky mountains—regions where treeless prairies and plains abounded when the country was but recently settled, but which are already beginning to be dotted over with useful and beautiful trees, whose cooling shade is so grateful to man and beast in the sunshine months, and whose protection is so important when zero winds and blizzards come rushing

down from the Frost King's realms. A happy thought it was, an inspiration indeed, which suggested Arbor Day, a day designed to awaken the attention of, and prompt to action, all the young as well as the old. Uncounted millions of glorious trees will, in this and coming years, spring up and grow into stately proportions, serving so many useful purposes and affording so much delight—trees that would not have existed but for Arbor Day. We need not enlarge upon the thought, which is well discussed in the entire following pages. Arbor Day, while designed for all, is especially valuable to the young. The child that plants and names a tree and cares for it, will have something to love, something to divert his mind from ignoble thoughts; and as it grows heavenward, from year to year, it will lift up his own aspirations. Let every child have his or her own tree, on the home ground, and a personal interest in one on the school ground.

“TWELVE TREE-PLANTING POINTERS.

“Planting a tree is doing work for *each* of many after years, usually for decades, or for generations—frequently for centuries. Many a tree planted this spring will give pleasure to the eye and shade to the head, all through the planter's own life, through that of children and children's children. Indeed, some of the trees planted out this month and the next will be in stately vigor, and give

pleasure to many, a hundred years after the planter, young or old, lies beneath the sod. Ten minutes of extra time and care, or a hundred of them, devoted to the best planting and care of one tree, will tell upon its life and upon its value in each of all these many after years. One or a few trees well selected, well planted, and well cared for during the first year or two, will usually be more valuable than a far greater number hastily set out, and then neglected. In the numerous practical suggestions, from men wise by long experience and observation, which the readers will find scattered all along through the columns of this number, there are a dozen points upon which all agree, and which every reader should promptly and carefully go through with and study at this seasonable period. We briefly summarize those of most importance: After due care in selecting the best specimens, which are the cheapest in the end: (I.) In taking trees from nursery or forest, preserve all the roots and fine rootlets possible. Avoid breaking them in shaking off surplus earth, and *dig* them out instead of pulling them up. For this reason, trees from nurseries located on light or friable soil are preferable to those on clayey ones. (II.) Trees from nurseries where they have been subject to one or more transplantings in their early growth, are usually better supplied with a mass of fibrous roots near the base of the stock than those from the forest. Incidental to this,

especially for all trees over one year old, and particularly for those having a deep tap-root, naturally it is better to sever this tap-root within a foot of the surface with a spud (a broad chisel fitted to a handle) or with a narrow spade, early in the spring prior to transplanting in autumn or the following spring. This promotes the growth of a very desirable root mass. (III.) Most carefully guard the roots from any exposure, even of a few minutes to sun or wind. Dipping them in a "mud porridge" as soon as lifted helps much, if this coating be not allowed to get dry. Keep them moist in moving, and if there is to be a day or an hour's delay after arriving and unpacking, heel them in; that is, set them in a trench or opened ground, and cover all the roots with soil until the last moment before planting. (IV.) Give the roots a deep and broad bed of good soil to start and grow in—a thing easily attained in naturally poor, or clayey or sandy soil, by digging out a hole of considerable dimensions, and filling in with soil from elsewhere. A little care in this may manifold the future growth and value of a tree. (V.) Spread out the roots well and naturally, and set only a trifle deeper than they grew before removal. There are only a few exceptions to this rule. (VI.) Fill fine soil well in *under* and *around* the roots, and firm it by pressure. (VII.) Unless the soil is quite moist and the weather damp and cloudy, and likely to be, *before* filling in the top earth pour in water

enough to pack the soil around the roots and to soak down one or two feet, so that there will be no lack of moisture until the new roots are well established, with abundant new feeding rootlets. (VIII.) In after watering, if needed, avoid the 'little and often' method. Instead of sprinkling the surface, and thus producing a crusty layer impervious to air and sun, better dig a hole near the base and pour in water enough to soak far down. Moisture will evaporate ten times faster from the top inch layer than from one a foot deep. (IX.) Unless there is a continuous wet season, a *mulching* of coarse manure, or cut grass, or straw, or leaves, from two to four inches thick and extending out two to five feet each way from the trunk, according to its size and the extent of roots, is a very great protection and starter, and usually saves the necessity of much watering even in a dry season. (X.) Unless the trunk and branches are very small, or the soil unusually firm, weighting it temporarily with a few stones, or with extra heaping on of heavy earth, to be early removed, will prevent swaying and rending the tender, newly-started rootlets. It is in effect like the present method of enclosing a broken human limb in a casing of solid plaster of Paris to prevent any possible disturbance of the nascent muscles, nerves, tendons, and blood-vessels. Where winds prevail from any direction, as they usually do, lean the tree a little in that direction when setting out. (XI.) Except with

evergreens and ornamental specimens, already shaped to a desirable form, trim and reduce the top fully as much as there has been a decrease of roots and rootlets in the taking up. (XII.) 'Just as the twig is bent the tree's inclined;' and a mar or scar on the infant tree is liable to ever after, visibly or invisibly, affect its beauty or its vigor and its value. So take good care to direct and shape its stem and branches, and protect it from careless or violent hands. If exposed to danger from the careless man or beast, set warning or guarding stakes on either side, and if necessary add protecting cross slats, or wires, or wire nettings. If not 'inclined' naturally to an upright and comely form, a stake and cords will compel it to follow your wishes and will. Take care to guard against chafing or constriction from the cords."

ARBOR DAY IN THE UNITED STATES.

BY N. H. EGGLESTON, FORESTRY DIVISION, U. S. DEPARTMENT
AGRICULTURE, WASHINGTON.

Arbor Day, which originated in Nebraska, is already established in at least *twenty-seven* of our states and three of our territories. In most of them it is established by law, either by act of the legislature or the proclamation of the governor, or both combined. The latter is more commonly the case, the legislature establishing Arbor Day and

authorizing the governor to designate from year to year the particular day to be observed as such. In several of the states the law also makes Arbor Day a legal holiday. In a few states the day has not yet received a legal sanction, but is observed under the direction of the State Agricultural or Horticultural Societies or school superintendents. In West Virginia and Alabama, though not established by law, the day is quite generally observed by public schools, under the direction of the state superintendents.

It is legally established in the following: California, Colorado, Connecticut, Dakota, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Maine, Massachusetts, Michigan, Minnesota, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Tennessee, Vermont, Wisconsin.

A NATIONAL ARBOR DAY.

BY B. E. FERNOW, CHIEF OF FORESTRY DIVISION, U. S. DEPARTMENT OF AGRICULTURE, WASHINGTON.

In reply to your request for my views on Arbor Day, I gladly take occasion to express my growing conviction that the idea of Arbor Day, which, so far as I know was an original American one, is fraught with promises of great results for the future forestry interests of the nation,

although such pigmy work as the actual tree planting on Arbor Day cannot be considered for a moment as in any way repairing the enormous yearly inroads into our natural forest supplies, by which nearly twice as much wood is removed every year as can possibly grow annually on our forest area of half a billion acres.

For one who, like myself, has been accustomed to see a forest worked as methodically as a farm, the crop being replaced as it is utilized—there is in little Germany expended yearly a round \$2,500,000 for replanting say 500,000 acres—it is difficult to persuade himself that we must even begin with such humble means as a popular festival to bring about the great economical reform which we need, in the utilization of our forest resources and their recuperation. Yet, with the true resignation of a forester, who plants the trees which his children may cut, I recognize the truth of the adage "*De minimis maxima*," which Everett has translated so neatly :

" Large streams from little fountains flow ;
Tall oaks from little acorns grow."

The minds of the first settlers of the wooded shores of this continent were educated by dire necessity to the need of destroying the forests, that the fields might bloom ; the minds of their descendants must be educated to the need of conserving, in proper proportion, the forests, that the fields may not cease to bloom. We are fortunate that this

education comes before dire necessity has established herself as teacher; that it comes in the shape of a pleasant "Arbor Day festival," which teaches young and old to reflect on the value of a forest tree, and which inspires the first scintilla of interest in the life and enthusiasm in the planting of a forest tree, which foreshadows the work of the forester in the coming generation. It is, therefore, especially the young, in school and out of school, who should be impressed with the significance of the day so set aside; who should be taught the meaning of their planted tree with regard to the development of the nation; who should understand that they inaugurate with this celebration a new era of American life—the era of forest planters, arising out of the era of forest destroyers.

As you will see from the statement prepared by Mr. Eggleston, there are enough of the states awakened to the significance and educational value of Arbor Day to make the inauguration of a national Arbor Day not a chimerical idea. Such an institution would be desirable, for many reasons, and would give the impetus of united enthusiasm to the work of forestry reform. The only practical objection to such a national Arbor Day, that tree-planting cannot be properly performed in all parts of the country on the same day, becomes invalid if the *planting* is done on the days best suited, which are not the sunniest, and the celebration is deferred to the common holiday; for while

in the prairie states the trees actually planted may form quite an important item, it is mainly the spirit which arises from a communion of ideas that is to be fostered by the Arbor Day, the spirit of improvement.

While thus we still believe in the shortcomings of our own generation, instead of bewailing the loss of the good old times we look forward to a better coming time, and are thus actively preparing the way for it.

ARBOR DAY IN NEBRASKA.

BY DR. C. E. BESSEY, DEAN OF THE STATE AGRICULTURAL
COLLEGE, LINCOLN, NEB.

Nebraska has the honor of having originated Arbor Day. Hon. J. Sterling Morton suggested the name and the day to the State Board of Agriculture, and it was at once adopted. Soon after, it was set apart by law as a day for the annual planting of trees, the 22d of April being designated. The day is very generally observed; banks are closed and much of public business is suspended. The schools have a holiday, and the pupils, under the guidance of their teachers, attend to the planting of trees on the school grounds or elsewhere. In many cases special programmes are provided, the pupils reciting poems, declamations, engaging in singing, etc., etc., in order to more perfectly celebrate the day. In the higher institutions of

learning, as the Normal School and State University, addresses are delivered by eminent men and listened to by the students and faculty. On the campus the various classes engage in planting commemorative trees, make speeches, and recite original poems.

WHAT TO PLANT IN NEBRASKA.

BY PETER YOUNGER, JR., GENEVA, NEB.

Arbor Day is duly observed in Nebraska; thousands of trees are planted by school children, and in some localities there is quite a strife to see who can plant the greatest number. As many are inexperienced in tree planting, the question naturally arises, "What shall we plant, and how?" The first question can be answered by finding out what kind of trees are native to your locality. Nature is a safe guide, and by planting trees suited to the locality many failures will be avoided; yet we have trees, not native, doing apparently as well as those which are.

"HOW TO PLANT" is a rather difficult question to answer, as nearly every planter has a different mode. Our method of planting forest tree seedlings, for groves, wind-breaks, and timber claims, the trees ranging from five to thirty inches in height, is as follows: The ground is first plowed as deeply as possible, then thoroughly harrowed

and leveled with a plank. This gives a smooth surface, making the ground much easier to walk over and better to cultivate the small trees. The surface is marked off three feet eight inches each way. We consider this distance much better than four feet, as the corn plow will cut the entire space clean, while in planting four feet apart, a narrow strip is left untouched by the plow, allowing a growth of weeds, which will cause more work another season.

The trees are then carefully assorted, the large ones being planted separately from the small ones. The planting is done by two men, one using the spade, the other carrying the trees (we use a large pail partly filled with water to carry trees in). The former sinks the spade into the check marks, and presses it forward, thus making room for the tree. The other man places a tree behind the spade, and the spade-man presses the earth firmly about the roots with his foot. In this way two active men can plant 4,000 trees per day. Our men often average an acre per day each, when the soil is in good condition.

CULTIVATION.—The most important thing, after planting, is cultivation. If trees were as carefully cultivated as a field of corn, there would not be many failures. We commence to cultivate about two weeks after planting; then aim to cultivate every ten days until the first of August. The first season is the most critical for trans-

planted trees, hence the necessity of high cultivation. It pays to give special care the first season.

GROWTH FIGURES.—Trees planted and cultivated as above have made the following growth the past two years. The trees were seedlings when planted in the spring of 1886. We have not selected the largest, but rather give an average after measuring several trees in different parts of the row. In the table we give elm credit for 5 feet 9 inches growth in two seasons, while the largest elm in the row made a growth of 7 feet 11 inches; soft maple 5 feet 5 inches, largest trees, 7 feet; Russian mulberry, 5 feet 6 inches, the largest trees 6 feet 10½ inches.

PLANTED IN 1886.	Present Height.
Ash.....	4½ ft.
Birch, Canoe.....	4½ ft.
Box Elder.....	5 ft.
Black Walnut.....	2½ ft.
Black Locust.....	6½ ft.
Catalpa.....	5 ft.
Elm.....	5½ ft.
Honey Locust.....	5 ft.
Linn	3 ft.
Soft Maple..	5½ ft.
Russian Mulberry.....	5½ ft.
Sycamore.....	4½ ft.

We have presented above a list of two years' growth. We will now give figures from five to ten years' growth,

which show that some varieties, slow to start, often make a large growth when well established :

KIND OF TREE.	Number of Years planted.	Present Height.	Diameter now one foot from ground.
Ash.....	5	11½ ft.	2 in.
Austrian Pine.....	5	8 ft.	4 in.
Honey Locust.....	5	12 ft.	4 in.
Catalpa.....	6	13 ft.	5 in.
Ash.....	8	19 ft.	4½ in.
Scotch Pine.....	8	8 ft.	3 in.
Austrian Pine.....	9	13 ft.	7 in.
Soft Maple.....	9	24 ft.	5½ in.
Black Walnut.....	10	20 ft.	5 in.
Cottonwood.....	10	35 ft.	13 in.

Our experience has taught us that the catalpa, honey locust, Russian mulberry, and ash withstand the extremes of drought much better than other varieties, and we find all are durable (except ash) for posts.

N. E. NEBRASKA TREES.

BY ORVILLE B. HAZEN, NORFOLK, NEB.

What trees shall we plant? My experience is limited to the last four years in Madison county. Of evergreens I have great faith in cedar, red and white, Norway spruce, Scotch and white pine. Of deciduous trees I would take European larch, white ash, wild black cherry,

American and canoe birch, silver and Norway soft maple, white and red elm, *catalpa speciosa*, from the seed grown in Northern Illinois, gray and white willow, black and white walnut, and black locust, all of which do well. Success of course depends on general management mainly. My soil is dark loam with some light clay and sand in places, upland prairie, hilly or rolling. Give the best of cultivation for the first five years. Keep fires out by plowing the grass under twice on borders.

ARBOR DAY IN NORTHERN ILLINOIS.

BY ARTHUR BRYANT, PRINCETON, ILL.

What varieties to plant, and what are best adapted to this section of the country, depends very much on circumstances, and on how good care and cultivation can be given.

STREET TREES.—In planting street trees the usual method is to set them out in the hard soil of the roadside, digging a hole barely large enough to admit the roots, and with a very sparing "God bless you" in the way of a mulch, leave the trees to take care of themselves the rest of the season. Soft-wooded trees like the soft maple, elm, cottonwood, and willow, take hold much quicker when transplanted than the hard-wooded varieties, frequently making as much growth the first year as the others

do by the third season ; therefore, these being less likely to meet with adverse seasons before they are established, are more popular with many.

I consider the white elm the best street tree for this section of the country. It is of remarkably quick growth, soon gets established in its new quarters, and when old is graceful and grand in its proportions. Soft maples are easily handled, and when properly trained and not allowed to fork, will resist most storms. The American linden is a fine avenue tree. The silver and scarlet maples, catalpa, chestnut, English alder, mountain ash, tulip tree, magnolia, Wier's cut-leaved maple, and different varieties of the birch and larch are all hardy and desirable. Of the hard-wooded trees, the sugar maple is the most popular, and one of the finest avenue trees known. The ash, walnut, butternut, Norway maple, burr and white oaks are all fine for general planting.

CEMETERIES, ETC.—There should be but few, if any, large trees planted on individual lots in cemeteries. For this purpose low growing trees, flowering shrubs, and dwarf evergreens should be procured, which will occupy but little space when matured, leaving the large trees to be planted on the avenues and grounds devoted to that purpose.

NECESSARY POINTS IN PLANTING.—In all plantings on uncultivated grounds, great care should be taken to

prevent injury liable to occur from drouth. Many of the failures in planting trees of this class are due to lack of care in this particular. Large trees are procured, with long, naked stems and but little foliage; these are planted in hard, dry soil, and but little earth is stirred; when they are set the ground is not mulched. Now how can any one expect success from such planting, especially in an adverse season? A few necessary points in planting street trees are: Dig your holes large enough so as not to cramp the roots of the trees; loosen and mellow the ground for several feet around the holes; mulch heavily and widely; protect the bare body from the sun by wrapping; frequently a board placed on the south side of a tree is sufficient. A little attention to these matters will often make the difference between success and failure.

ASKED TO SELECT TREES.—The families of Lincoln, Logan, Grant, Douglas, and Cullom have each been asked to select a tree to be planted in the state house grounds at Springfield, Illinois, on the coming Arbor Day.

ARBOR DAY HINTS FOR CENTRAL ILLINOIS.

BY C. A. HAMMOND, SECRETARY ILLINOIS STATE HORTICULTURAL
SOCIETY, WARSAW, ILL.

Less than a score of years ago, one of the enterprising spirits of the "Great American Desert" conceived the

idea of setting apart each spring a certain day for tree planting. The first proclamation for the observance of such a day was made by the governor of Nebraska, at his suggestion; and the next year "Arbor Day" was legally established by act of legislature. It at once struck a popular chord and wonderfully stimulated tree planting. Kansas followed in the wake of her younger sister, and for a decade has kept even pace, and perhaps outstripped her in the good work. Minnesota, Michigan, Ohio, and several of the New England and some of the extreme southern states soon fell into line; and now in the year of grace, 1888, Illinois will, by proclamation of the governor, do what she should have done many years ago—observe her first official Arbor Day.

EXTENSION OF ARBOR DAY.—The first thought of the originators of this work was its economic importance, but the subject grew on their hands, and planting about the house, in school and church yards and cemeteries, and along the roadsides soon followed, and in our state this branch of the work promises to be the most popular on the approaching Arbor Day. Every town and village of any pretensions in the state should have a public park in which should be planted one or more specimens of all our native trees, both deciduous and evergreen. While it is a pleasure to know that many of our enterprising towns have such parks, which are exceedingly creditable to their

public spirit and taste, it is hoped and expected that they will greatly improve and beautify them, and that those who have not done so will embrace this occasion to inaugurate the enterprise.

LAWN planting may properly be considered of the first importance, and the first question to decide is, what to plant. The State Horticultural Society has recommended an excellent list of trees for various purposes [given elsewhere], but I will name a small select list which many years of experience and observation have convinced me are the most valuable. For beauty there is nothing equal to the *magnolia acuminata* or cucumber tree. It is perfectly hardy, a good grower, always clean and handsome, and attracts much attention. The only objection is that it is somewhat difficult to transplant. A rival to this is the tulip tree, just as hardy, a more vigorous grower, and nearly as handsome, with the advantage of being more easily transplanted. *Catalpa speciosa* is an indispensable lawn tree; is hardy, a rapid grower, with large fan-like leaves and abundant flowers, which makes it admired by all. The cut-leaved weeping-birch is a charming tree, and should be better known and more generally planted. The sugar maple is too familiar to need any recommendation. Norway spruce, white and Scotch pine are the most desirable evergreens.

FOR STREET AND ROADSIDE planting, nothing is equal

to elm, sugar maple, and catalpa. Some of my correspondents object to planting by the side of country roads, on the ground that the shade will prevent the rapid drying up of mud after rains; but in these days of tiled and machine-made road-beds, this objection is not worthy of consideration. We would urge upon every land owner the duty of planting, as a means of enhancing the value of his property, as well as adding to the beauty of the country. The mistake is often made of planting too close; sixty feet is the minimum distance which these large growing trees should be set, and possibly eighty or one hundred would be better still.

Next our PUBLIC SCHOOL GROUNDS demand attention, and what shall we say of them? Almost universally too small, without a tree or shrub to interrupt the fierce rays of the summer sun, with gates off the hinges, and the fence standing at an angle of forty-five degrees, covered with rubbish and overgrown with weeds, and the house a fit companion piece for the grounds—this is a picture of a great majority of them. They are a shame and reproach to the directors and patrons of the schools, and a disgrace to the noble state and the civilization of which we boast. This is an unfortunate state of things, but the case is by no means hopeless. Let the directors, and as many patrons as can be interested, devote a portion of Arbor Day to cleaning up the school yard and planting trees, and

others will soon become interested. Get the work well started and it will become so fascinating to the children that it will be comparatively easy to continue it hereafter. "Arbor Day" in schools was observed last year in about twenty-five states, and it is expected that it will be observed in at least ten more this season. Strong growers should be selected for school yard planting. Elm, catalpa, and sugar maple are, all things considered, the most desirable. The latter grows slowly while young, but after a few years quite rapidly, and for symmetry of form and beauty of foliage is unsurpassed. If a greater variety is wanted add tulip tree and linden or basswood. If evergreens are desired, select Norway spruce, white pine, and Scotch pine.

CHURCHYARDS.—No state can boast of more or better country churches than Illinois. They are as a rule commodious, comfortable, and tasty, and speak well for the moral and religious condition of our people. But standing, as so many of them do, without a tree or shrub about them, "white, glaring, and ghastly," it does not speak so well for the æsthetic taste of their attendants. Let every rural church in the state observe the approaching Arbor Day by ornamenting its grounds with trees, and remembering that

"The groves were God's first temples,"

and that it is a duty we owe to Him, to ourselves, and to

our fellow men to make the surroundings of His house as pleasant and attractive as possible. The recommendations for school ground trees, etc., apply here.

“GOD’S ACRE.”—No one who has noticed the neglected condition of so many of our rural cemeteries will question the necessity of improving them. Enclosed with a rotten, tumble-down fence, overgrown with weeds and brush, a portion of the graves surrounded with a rail pen, and here and there a mound of clay left from a new-made grave, is a description applicable to very many of them. They are a relic of barbarism we should speedily rid ourselves of, and, like our neglected school grounds, are a disgrace to the civilization of the last years of the nineteenth century, and a constant reproach to those whose loved ones are sleeping there. Make bright and beautiful “God’s Acre;” cover it with a velvet sward; plant weeping trees, to express our grief for the loved ones gone before, but plant evergreens, bright emblems of the better life beyond. *Arbor vitæ*—tree of life—and white pine, always pointing upward, are very appropriate here.

ABOUT THE TREES.—Many who desire to plant trees will ask, “Where and how can I best procure them?” As a rule, nursery-grown trees are much superior to those taken from the forest. We would therefore advise those who expect to plant to order from their home nurseryman, and if he cannot supply them from his own stock, he will,

if ordered in time, get them from some one else. But if you fail to get what you want, go to the woods, seek out a grove of second growth, and dig elm, maple, linden, hackberry, walnut, etc., and plant and care for them properly, and you and your posterity will be more than satisfied with the result.

A GOOD HIGHWAY LAW.—Tree planting in this great prairie state should be vigorously pushed to the front. The legislature of Michigan has recently passed an act to encourage highway planting, which provides, under certain restrictions, that every man planting along the road bordering his own property shall be credited twenty-five cents on his highway tax for every tree so planted. Let us urge upon the next legislature the importance of such a law, to remain in force until every country road shall become an avenue of living green, adding beauty to the landscape, value to the adjacent farms, and causing the weary traveler to bless the far-seeing men who planned and built these living monuments. Also the importance of providing for the improvement and ornamentation of our public school-houses and grounds. With such laws on our statute books, and Arbor Day properly observed, in a few years our noble state, for which nature has done so much and man so little, will be one of the most beautiful spots of earth.

SOME DON'TS.—In response to a number of correspond-

ents, I submit the following words of warning: Don't plant fruit or nut bearing trees in the school yard! Don't plant too many strong growers, or too large a proportion of evergreens in the cemetery! Don't plant too near the house! Don't plant too closely by the roadside! Don't plant the soft maple if better trees can be procured!

ARBOR DAY IN SOUTHERN ILLINOIS.

BY JABEZ WEBSTER, CENTRALIA, ILL.

I am proud of the fact that we, too, in Illinois are to have an Arbor Day. Besides the sentimental phase of the question—the singing of birds in the lofty tree-tops, the grateful shelter and protection to man and beast in winter, and the refreshing shade in summer—there is a grander and more widely-reaching principle in the planting and the caring for trees. I well remember the exquisite pleasure afforded me after a twenty years' absence from my native home, by seeing a tree planted in my boyhood nearly forty years before. I asked an American traveler on an ocean steamship returning from a trip to Europe, what feature of the older countries made the most pleasant and lasting impression on him. He replied: "The love of the people, rich and poor, for the beautiful in nature. The love for beautiful trees and flowers, both in public and private, as exhibited by the humble cottager and around the village

railroad stations in England, France, and Germany, is universal. The neatness and good taste displayed with climbing vines, trees, and plants around public and private establishments, the grandeur of their boulevards and parks, is certainly worthy of our emulation as a people."

I thoroughly agreed with him. In our great country, in the scramble for the almighty dollar we have almost lost sight of the beautiful in nature. The disparagement of country life is one of the worst tendencies of the times; the hankering for city diversions and excitements, and so-called more genteel employment, has brought ruin to many worthy families. Every influence around the young should combine to foster home attachments, for there is national protection, as well as education, in the love of home. To love the beautiful in nature is to elevate the race, and to inculcate this should be a part of our national system of education. Men of means should take the lead; when once started it becomes contagious, but not dangerous; its influence is soon felt in society, and also in the price of real estate. The love for the beautiful in nature sharpens the finer senses, and quickens the intellectual faculties—makes better boys, better men. Our railroad stations and public school grounds are generally uninviting and often repulsive; but with the founding of Arbor Day we have made one step in the right direction, and in a few decades we may reasonably expect to see beneficent results.

WHAT TO PLANT.—But the question will be asked, “What trees shall we plant, and how many?” I would answer, let every prairie farmer set out one or more trees on this first Arbor Day. Let every school teacher make preparation to have one or more trees planted well, as an object lesson for the pupils. Let every head of the family devote half an hour to planting one or more trees on Arbor Day, so each member of the family will become interested in caring for and studying its wants and requirements. For Southern Illinois the following trees will be found suitable, and can easily be obtained from established nurseries at reasonable prices throughout the state: red, white, and slippery elm, white ash, beech, tulip tree, linden, white birch, blue ash, soft and sugar maple, bird cherry, box-elder, hackberry, sycamore, black walnut, sweet chestnut, European larch, golden willow. The beech and tulip are not advised for general planting, except in the extreme southern counties of the state in timber and hilly country. The linden and sugar maple are adapted to prairie planting where there is a good depth of soil, but on poor washed-out places they will not succeed. The same may be said of black walnut. The age of trees for transplanting varies somewhat, but I recommend a thrifty nursery-grown tree from three to six years old, once or more transplanted from seed bed. The soft maple, white elm, white ash, box-elder, and bird cherry

make good and desirable trees at three to four years. I would recommend the following evergreens for Southern Illinois: white, Scotch, and red pine, Norway and white spruce, Irish juniper and red cedar.

THE TREES AND PLANTING.—After being well planted, trees in our climate should have the earth around them stirred quite often in the early summer months, and occasionally through the entire summer. They should also be mulched with green weeds, half rotten straw, or any substance which will retain moisture. A worthy friend of ours having purchased a variety of trees for a park, asked for instructions in regard to their planting and after-care. We replied by telling him: 1st, Do not expose the roots of any tree to a warm or cold drying wind; let them stay packed with damp straw in your wagon, taking them out as wanted, and planting one at a time. 2d, Do not crowd your trees into small, deep holes, but provide for each one a hole large enough to take in the roots in their natural position, and with some room to spare. 3d, If the soil is thin and poor, plow or dig out at least ten inches of the clay sub-soil and fill up with good, black surface soil from under a tough sod; or take sod and all and chop up with a spade in the bottom of the hole, thus making a rich bed of good, black dirt to set the tree on, and so to work in and cover the roots. 4th, Bear in mind that if the place where you want to plant your tree is not favorable to

growth, that now is the time to make it so—not after two or three fruitless attempts and failures. 5th, Remember that a tree will be sure to starve and die without plant food and moisture, and that this cannot be found in or contained by a hard, tough, clayey subsoil. 6th, Keep in mind the fact that most trees do not require to be planted on prairie soil deeper than three to four inches, but a mound of good soil corresponding to the size of tree and hole should be built up three or four inches higher than the surrounding surface. 7th, Cultivate often with horse power where it is possible, leaving the ground smooth and even to assist in retaining moisture. After July 1st mulch freely with green weeds or half rotten straw, or cover with a flat rock, or any substance which will retain moisture in a dry season. Water thoroughly once a week through August, or until rain comes to your relief. You will find in tree planting, as in nearly everything else, that work thoroughly done is the most satisfactory and profitable. Never use a spade to dig holes for planting trees where a plow can be employed.

TREE LISTS FOR ILLINOIS.

ILLINOIS STATE HORTICULTURAL SOCIETY.

The following lists of trees have been recommended by the most intelligent and successful planters in the state, as

suitable for the purposes named. They are too numerous for individual planting, but selections can be made to suit all conditions and tastes.

PARKS: Sugar maple, elm, sycamore, burr oak, black walnut, *catalpa speciosa*, *magnolia acuminata*, Norway maple, hackberry, linden, ash, mulberry, tulip tree, box-elder, Norway spruce, white pine, Scotch pine, chestnut.

LAWNS: Elm, sugar maple, tulip tree, *magnolia acuminata*, linden, cut-leaved birch, *catalpa speciosa*, Norway maple, ash, chestnut, Norway spruce, white pine, arbor vitæ.

STREETS: Elm, hackberry, sugar maple, ash, linden, tulip tree, sycamore, *catalpa speciosa*.

COUNTRY ROADS: Elm, sugar maple, *catalpa speciosa*, black walnut, linden, hackberry, mulberry, wild cherry.

SCHOOL GROUNDS: Elm, sugar maple, tulip tree, *catalpa speciosa*, linden, ash, Norway spruce, Scotch pine.

CEMETERIES: Weeping birch, cypress, white pine, arbor vitæ.

BY C. N. DENNIS, HAMILTON, ILL.

WEST CENTRAL.—Would recommend for this locality for outside planting: Elm, soft and hard maple, black walnut, *catalpa speciosa*, linden, ash, hackberry, sycamore. For parks and lawns, would add chestnut, *magnolia acuminata*, mulberry, Norway spruce, white pine, arbor vitæ,

and red cedar. For cemeteries, weeping birch, and willow, arbor vitæ, Irish juniper, etc. Pecan, horse chestnut, and hickory can be grown best from seed planted where they are to stand; paw-paw and persimmon may be grown where they can be well cared for.

BY W. A. WATSON & SON, NORMAL, ILL.

NORTH CENTRAL.—In central Illinois for large parks, and other places of broad extent, the following would be very suitable: American white elm, black walnut, oaks in variety, white and yellow willows, American linden, white ash, cucumber, magnolia, and sugar maple. For smaller places, add to the four last named, tulip tree, box elder, white birch, and catalpa. For street planting we prefer the smaller round-headed trees such as sugar maple, box elder, white ash, etc. For door-yards and small lawns, give us more shrubs and less trees, more sunshine and less shadow, more beautiful green grass, and brightening flowers. For shrubs, the following are all beautiful and appropriate, generally hardy and free bloomers: Altheas, cornelian cherry, dwarf almond, deutzia, dogwood, euonymus, flowering currants, honeysuckles, hydrangea, Japan quince, and roses of the different kinds in variety.

ARBOR DAY CAUTIONS.

BY MILO BARNARD, PRESIDENT OF THE ILLINOIS STATE
HORTICULTURAL SOCIETY.

To the horticulturists of Illinois who have long labored for the establishment of a holiday devoted to tree planting and rural adornment, its accomplishment is a source of gratification, and congratulations are now in order. But we must remember that its success or failure is yet to be tested. A general observance of the day, and a cheerful performance of the duties enjoined, will make it a grand success, while carelessness or negligence on our part will make it a failure. The day selected may not be the best, but time and practice will determine this. And it may, upon trial, prove impracticable to devote the same day to this purpose in all parts of the state, but this will be readily adjusted in the future to suit circumstances and the wishes of the people.

THIS DAY IS DESIGNED for the benefit of all classes of people—the high, the low, the rich, the poor, old and young, male and female—but it is especially designed for schools, cemetery and other associations, public improvement committees, and kindred organizations. No better mode of teaching by object lessons could be devised, than for teachers to assemble their flock on Arbor Day, conduct them into the forest, and while digging trees and plants for home or school yard, teach them lessons in botany,

ornithology, and entomology. And there, in Nature's garden, the warm, soft air of glad, joyous spring-time, melodious with the notes of happy song birds, and all Nature bursting into new growth, these young minds will receive lasting impressions of that great mystery called life. This will be the proper time and opportunity to dress up cemeteries and get them in shape for Decoration Day.

But with liberal planting of trees, shrubs, vines, plants, cuttings, and seeds, Arbor Day may be a failure, unless followed by good care after the planting; and here is another opportunity to teach the little ones habits of industry, perseverance, neatness, and promptitude. All seeds, cuttings, and small plants should be planted where they can receive good cultivation; and trees planted where it is not practicable to cultivate the ground, should be heavily mulched, to retain moisture and prevent the growth of weeds.

MISTAKES IN PLANTING.

BY L. R. BRYANT, PRINCETON, ILL.

I think it advisable to call attention to some mistakes which tree planters are liable to make, not with the intention of at all discouraging the extensive planting of trees on the coming Arbor Day, but to have them so direct their efforts as to produce best results.

ORCHARDS AND WINDBREAKS.—Perhaps one of the greatest mistakes is the imperfect preparation of the soil and careless manner of planting. In planting an orchard or windbreak, the ground should be plowed deeply and brought to the best possible condition before setting the trees; it can be done then much better and more easily than afterwards. Where trees are planted singly, dig large holes and loosen the ground deeply in the bottom, but set the tree only a trifle deeper than it stood before; spread out the roots in their natural position and work in the fine earth among them. A couple of pails of water thrown in, when the hole is two-thirds full, will be an advantage. When this has settled away, fill up the hole, tramping the earth firmly. Where trees have long bodies or trunks, it is advisable, when digging, to mark the south side of the tree and set in the same position as before, or in case this is not practicable, to protect the south and south-west sides slightly from the direct rays of the sun for a year or two. After planting is attended to, good cultivation or

PROPER MULCHING IS NECESSARY.—If mulching is done, it should extend for some distance around the tree. A great mistake is often made in this respect. I have seen mulching put around trees just the size of the hole, and the consequence was that in a dry time there would be a crack all around the circumference of the hole, and the mulching was worse than useless in hiding the mischief. Coarse,

rank manure should never be put in the holes or around a newly planted tree. As a matter of course, extreme care should be taken not to expose the roots of trees unnecessarily to sun and wind.

SMALL YARDS AND CEMETERIES.—A mistake often made in small yards is too close planting. How often we see a city lot with a row of elms or silver maples outside the sidewalk, another row just inside the fence, and between this and the house several Norway spruce, pines, or other rank-growing evergreens, and no room for the proper development of any of them. It all looks well when the trees are small, and if thinning out at the proper time is unsparingly done it may not be objectionable, but few have the heart to do this when it should be done. A single row of street trees, with a few small shrubs, evergreens, or deciduous trees, are all that are permissible. In cemeteries it is common to see lots surrounded by an evergreen hedge, rusty and dying at the base, and the interior filled up with coarse-growing evergreens. This is all right enough in the proper place; the only trouble is that the owners have tried to do on a spot of ground only a few feet square what was only appropriate on an acre. Large trees are, as a rule, allowable only in the general planting of cemeteries, or if set out in private lots, should be deciduous trees, and of such varieties as will bear trimming up high.

ROADSIDES AND SCHOOL YARDS.—A mistake in roadside planting is the digging up of large trees in the woods, with short, coarse roots, and trimming the tops to bare poles. While these often eventually make fine trees, much time is lost. Nursery-grown trees are preferable; or where forest trees are taken they should be dug around the spring previous to moving and the large roots cut off. This will insure plenty of fibrous roots, and the increased growth will well pay for the extra work and delay in planting. Perhaps the greatest mistake in planting school yards, especially in the country, is neglect. In planting school grounds where no janitor is employed, it is best to select fair-sized, strong-growing trees which can easily be protected at the start, as it must be remembered that "boys will be boys," and may often thoughtlessly destroy choice trees. Fruit trees, or large nut-bearing trees, like chestnuts or walnuts, are, for this reason, objectionable in a school yard.

FARM PLANTINGS.—In general planting on a prairie farm, plant first windbreaks, screens, and roadside trees of the most approved and hardiest varieties, thus giving protection first. Afterwards set out the choicer kinds more especially for ornament, as means and fancy may dictate. Do not make the mistake of planting trees and shrubs, which need the shade and protection of larger trees, in locations exposed to the hot suns of summer and winds

of winter. As to varieties, the list recommended by the officers of the Illinois State Horticultural Society [given elsewhere] is a good one, but I would add for lawns and parks, the white or canoe birch and the American and European larch. For windbreaks plant Norway spruce in single rows six to ten feet apart, or for grove and wind-break together nothing is better than white pine. Do not make the mistake of undertaking more than can be done well. Make plans and preparations beforehand, and all the increased care, expense, and labor taken in planting and cultivation will be richly repaid in comfort and satisfaction during all of the after years.

ARBOR DAY IN IOWA.

BY PROF. J. L. BUDD, AGRICULTURAL COLLEGE, AMES, IOWA.

While Nebraska is justly entitled to the credit of originating Arbor Day, with its associated lessons and pleasant observances, Iowa soon followed, and added, as early as 1874, a list of premiums aggregating \$200, to be awarded as follows: For the largest number of trees set in permanent plantation, for the greatest number of larch or evergreen trees, for the greatest number of ash, for the greatest number of oaks, for the greatest number of any valuable tree planted by one person, for the greatest number planted by a boy or girl under sixteen years old, etc.

Twenty-one separate and distinct premiums were offered, ranging from \$5.00 to \$35.00, and the list of premiums was published in most of the newspapers of the state. Hundreds of persons indicated their intention of competing for the premiums, but the 20th of April turned out to be peculiarly stormy in the eastern part of the state, with low temperature and snow in the western portions, with the result that few were able, even if willing, to meet the requirements of the list.

With this experience the Arbor Day plan was gradually changed into that of extended distribution of pamphlets of instruction to tree planters, and the offer of premiums to successful planters, irrespective of the day, week, or month when the trees or seeds were planted. Since 1872 the writer has sent out many thousand circulars and Forestry annuals, and the society has paid a number of premiums on extended and systematic planting of trees on the prairies. The idea of planting on any specific day has been lost by the society for a number of years, but last year the superintendent of public schools—Mr. Akers—set apart May 4th to be observed as Arbor Day in the public schools of the state. In quite a large proportion of the schools interesting and instructive programmes were carried out in connection with the planting of trees in the school yards. As Prof. Northrop has said, "The economic and æsthetic here go hand in hand. This enlisting

of schools has proved a most effective way of calling public attention to the subject of forestry." It seems to be an initial move in the introduction of some of the elementary lessons in horticulture now common to the public schools of Austria and Prussia.

This spring, Superintendent Sabin has chosen Gen. Grant's birthday—April 27—for the observance of Arbor Day in Iowa, and has sent out to the schools of the state an interesting circular letter with appropriate greeting, sentiments, and suggestions in regard to programme. The motto of the Arbor Day annual should be the subject for thought and discussion in every school of the land: "The tree of the field is man's life." If the students, parents, and managers in every school in the state can be interested in the observances and sentiments of Arbor Day, we can hopefully look forward to the time when the school grounds of our country will have attached gardens as in Germany, and the students given elementary lessons on the planting, mission, and uses of trees and flowers. Speaking of this feature of the public schools of Europe, the writer gave the following incident in the summer of 1882:

"While walking from the little village of Proskau, in Silesia, to the grounds of the horticultural school, something over a mile distant, with my friend Gibb, scanning the trees and shrubs on each side of the arboretum road, active stepping young and middle aged men continually

passed us to the number of fifty or more. We began to wonder if they were students. The only argument against the belief was the appearance of maturity and age of the passers. On reaching the grounds we met the professor of horticulture, and about the first inquiry was: Are the men who have been passing us in such numbers students? 'Yes, they are students, but of a special character. They are teachers of our public schools taking lectures and practice here with a view to fitting themselves for the better fulfillment of their duties as teachers in the public schools.' Perhaps we cannot reach this condition of things at once, but a commencement should be made now."

TREES FOR BEAUTY AND SERVICE.

BY JOHN WRAGG, WAUKEE, IOWA.

I notice with great satisfaction the growing popularity of Arbor Day, a day legally set apart by our legislative Solons for planting trees to protect and adorn our homes, cemeteries, public school grounds, and all places which we would render attractive—a day which shall be a bright break in the hurry and push of our busy American life, and be to our people what "May Day" was to the youth of "Merrie England" in the days of "Queen Bess," but with a deeper significance; for on future Arbor Days those

who come after us will point with pride to some beautiful and stately tree or grove and say, *our* fathers and *our* mothers planted and carefully tended it, and *we* rejoice in its beauty and protection. In central Europe, the streets are lined for miles with productive fruit trees, planted by the authorities, and they are a source of profit, as well as a beautiful feature of the landscape. From them at ripening time the thirsty traveler may satisfy his needs, but is not allowed to waste or carry any away. We are afraid this plan would hardly do in the Northwest, even if the trees grew and yielded fruit as they do in Germany, as, to Young America, the law of "*meum et tuum*" is in most cases a dead letter. But trees may be planted which will afford grateful shade and protection in summer, and in winter be landmarks, and break the force of our blizzards and storms.

SOCIAL PHASE OF ARBOR DAY.—Those of our people who live in country homes, more or less isolated, have too few opportunities of meeting each other in a social way. We often fail to recognize the worth of those who may live quite near us, because we do not know them. But on Arbor Day we can, by a little previous arrangement, meet together on a common plane, to help each other, to advise, and to be taught. Friendships will be formed which will be as enduring as the trees we plant—which will grow with their growth, and strengthen with their strength.

These rural gatherings will not be, or should not—like many are, for a stated purpose—grim and ceremonious; but young and old and middle-aged will gather; our mothers, wives, and daughters will help us plan, yes, and help us plant, too; and what our children help plant they will thus learn to love; and it will be another tie to bind them to their youthful homes.

DECIDUOUS TREES TO PLANT.—Two of our best native trees are the white elm and rock or sugar maple. Both are found growing in most parts of every one of our northern states, and for stately roadside trees combine more desirable features than any others. The hackberry is a most desirable and beautiful tree, is easily transplanted, and should be better known. The linden or basswood is a native which should be more planted. Some of our most beautiful and graceful trees are ignored by many planters because they are native—“*too common.*” The walnuts, and in fact all nut-bearing trees, are hard to transplant, but it may be done with care, especially if the tap-root is cut off the spring previous to removal. This can be done by digging carefully under one side of the tree until the tap or center root is found. Kentucky coffee nut is, when in full foliage, a grand tree; it has very long, double pinnate leaves, two or three feet in length; it is found growing wild in most parts of the West and is quite easily transplanted. The plane, or sycamore, is

another of our common trees, with a beauty of color and outline peculiar to itself, and is always an object of interest. Of those not so well known as these is the magnolia acuminata or cucumber tree. This is found as a forest tree in the middle states, but is hardy enough to stand any climate up to the north line of Iowa. It is beautiful, its large leaves giving it a semi-tropical appearance. The tulip tree or yellow poplar and the catalpa are both hardy in this latitude, and both have a habit of branching out quite low, so it is necessary to keep the lower branches trimmed off until the desired height is obtained.

EVERGREENS TO PLANT.—Of the evergreens I prefer white pine where a large tree is desired, and where they can be planted far enough apart to grow to perfection. It is a native, and will grow on most any kind of soil not too wet. The white spruce is more compact in growth, has a beautiful silvery appearance, and is the best of the common spruces. It does not, however, grow so fast as the Norway, which is too common to need description. Though not an evergreen, the larch is generally classed with them, or at least with the conifers, which include all evergreens. Nothing is finer than an avenue of larch in summer, perfect in outline, always growing with straight, smooth trunks, the branches just pendulous enough to be graceful, and the foliage of the softest green; it surely should have a place in every collection of trees. The

European is preferable to the black or American larch, but either is desirable.

In the foregoing I have only named a few of the most desirable sorts which are easily obtained in most localities. It is a beautiful custom to plant a tree in the name of some dear friend, either present or absent. Let us, then, plant stately, grand, and beautiful trees for our friends, our children, and for those who may come after us, and who will love and care for them when we are gone. May many trees be planted this coming Arbor Day dedicated to the *Prairie Farmer*, and may they and it grow and flourish and be a blessing to all. And may it still be sung:

“Who sows a field, or trains a flower,
Or plants a tree, is more than all.

“For he who blesses most is blest;
And God and man shall own his worth,
Who toils to leave, as his bequest,
An added beauty to the earth.”

FROM A LONG EXPERIENCE.

BY E. F. BROCKWAY, AINSWORTH, IOWA.

Tree planting has been a hobby of mine for over forty years, and I expect to plant as long as I live. I often hear men of middle age saying: “It will not pay me to

plant trees, I will never get any good of them." No doubt such men have been eating the fruits of other men's labors all their lives. As a lawn or shade tree, I think the cork or white elm the very best. For profit in this state, I would plant black walnut and white pine. Thirty-one years ago this spring I set out 1,000 white pine in Muscatine Co., near Cone. To-day they are sixty feet high and twenty-eight inches in diameter. I lost very few by planting, though taken from the forest, and *not one* has died since in all these years. They are there yet, strong, vigorous, valuable, beautiful; a monument of which I am proud. Twenty-six years ago I planted 1,000 black walnuts; many of them are now fully sixteen inches in diameter, and forty acres of them would be a fortune. How to observe Arbor Day? Our state requires a certain number of trees on each school-house lot. Where it has not been done, it would be well to do it this Arbor Day, in the presence of the pupils, the teacher or director showing the best way to plant, and what to plant. In the spring of 1872 I invited my neighbors to help me set out trees on our school-house lot. I furnished 100 white pine. We planted them all the same day, and *every tree lived*. To-day there is not such another school lot in the county. They were three feet high when I planted; they are now fully thirty feet, making a perfect protection from blizzards in winter, and they are pleasant and

healthful the year round. I have given hundreds of trees to schools and churches, but many have not cared for them, and lost them. My own home is sheltered by 3,000 evergreens, from thirty to forty feet high, and I am confident they have paid for themselves this winter, and have done the same for many winters past.

ARBOR WEEK VS. ARBOR DAY.

BY G. B. BRACKETT, DENMARK, IOWA.

Iowa was one of the foremost states in the Union for setting apart a day for general tree planting. In the act of our general assembly appropriating \$1,000 to the State Horticultural Society it was made incumbent on them to award annually the sum of \$200 in premiums for the encouragement of forest tree planting. After carefully considering the subject with a view to encouraging as many as many as possible to compete for the premiums, it was decided to appoint a special day for planting throughout the state, designated as Arbor Day. Accordingly the society fixed the 20th day of April, 1874, as such day. But very unfortunately, our initial Arbor Day proved to be the most unpropitious day of the season, consequently tree planting on this day was nearly a failure, and since then Arbor Day has not been very strictly observed, every

one preferring to take the most favorable time to plant, rather than take the chances on a special day.

ARBOR WEEK.—Now, when we take into consideration the uncertainty of the weather, the condition of the soil, and the extent of territory, covering, in some cases, as in the state of Illinois, a range from north to south of 360 miles, thus making quite a variation in climate, is it a practical thing to do, to fix upon just one day in the year for tree planting? Would it not be better to extend the time to one week, and call it Arbor Week? Then those in the lower latitude can plant in the beginning of the week, while those residing farther north can plant later.

THE ELM.—As you will probably not have space for extended lists of trees recommended for planting, I will limit myself to one tree, the elm, which is undoubtedly the best one tree for all purposes. It is good for the street, for the country road, for the school grounds, for the town, for the park, and for cemeteries. It will grow anywhere and everywhere; its habitat has a wider range than any other tree; it is found all over Europe, in Asia, Africa, and as far east as Japan, and in this country its range is from as far south as Florida to Oregon in the north. It will grow on all kinds of soil, and what tree can be more beautiful than the elm, with its widely diffused, pendulous branches floating gracefully in the air. Plant it for ornament, for shade, for shelter; plant it by the

cottage and by the mansion, by the roadside, and on the school grounds; plant it in the park, and on the lawn.

PLANTING TREES—EVERGREENS.

BY E. B. PORTER, DELHI, IOWA.

The law of Iowa requires that a certain number of trees be planted in each school yard. This has been poorly complied with. A valuable lesson might be taught the children by having them assist in setting the trees with appropriate ceremonies on Arbor Day. Concerning the best kinds to set, I think it would be best for the inexperienced to commence with those which can be easily transplanted, such as catalpa, maple, and elm. They should not be less than six or eight feet high; smaller ones require too much protection. Catalpa should not be planted north of the Illinois Central Railroad in Iowa. Some succeed north of this while others fail south of it, but it marks the general line between success and failure.

IN SETTING OUT, dig the holes twelve to eighteen inches deep, so the tree may stand somewhat deeper when set than before. Be sure to dig the hole large enough so all the roots may be straightened out naturally. Some think even considerably larger holes are beneficial; at least they do no harm. Place the tree in position and shovel some surface soil around the roots. Throw on a half of a pailful

of water and shovel in some more earth. Pack as firmly as possible and then throw on a little loose soil to finish, so the surface will not bake about the tree. If the tree is large it should be supported by stakes, but old rags should be placed around it to prevent bruising. In any case it is advisable to stake it in for protection against stock, etc.

WITH EVERGREENS the same course should be followed except that much more care should be taken to keep the roots from becoming the least bit dry. This is especially fatal to them. The best evergreens for such purposes are white and Scotch pine, Norway spruce, and balsam fir; these should be at least two feet high for transplanting.

AFTER CARE.—When the trees are set they should be well mulched with straw, chip-dirt, or some light material. Care must be taken to place the mulch so as not to carry off the water. I once saw several large trees killed by laying boards on the straw to keep chickens away. Trees set as above indicated will not need watering except in case of long continued dry weather. Do not use less than two pailfuls to the tree, if any. A small amount will merely moisten the surface enough to bake without benefiting the roots.

PLANT GRAPES ON ARBOR DAY.

BY HON. SILAS WILSON, ATLANTIC, IOWA.

I desire to offer a few suggestions to the readers of the *Prairie Farmer*, while Arbor Day is attracting more or less attention. It seems to me to be a good time to urge the planting of vineyards. Every family in the country not already supplied should plant this vineyard on Arbor Day. A family vineyard should contain from 100 to 200 vines, according to the number to be supplied. Very early and late varieties should be planted in order to make the grape season last as long as possible. Such a vineyard should supply grapes enough of suitable kinds for at least two months. I would recommend planting for *early*: Moore's Early, Worden, Telegraph, Cottage, Lady, and Janesville. For *late*: Pocklington, Elvira, and Concord. For *good keeping varieties*: Agawam, Rogers' No. 15, and Delaware. Plant all vines deep, fifteen to twenty inches, and give clean culture. Cut back the first year to eight or ten inches, the second year to twenty or thirty inches, the third year to three or four feet, etc. Always prune in the fall after leaves drop; and lay down and give them winter protection, by covering with earth four or five inches deep. Let them remain covered until all danger of freezing is past in spring, then tie the vines up to wire or stakes, as suits your convenience. If this plan

is followed out, no family need be without a full supply of this health-giving fruit.

IOWA TREE LISTS AND NOTES.

BY F. H. BRUNING, KENT, IOWA.

SOUTH CENTRAL.—For ornamental trees the blue spruce heads the list for this locality, followed by silver fir, Colorado spruce, and Norway spruce. Of pines, the white leads, followed by the Colorado. The Scotch pine is the poorest we have. For a windbreak nothing equals the red cedar, and next to it comes Norway spruce. There is one thing greatly overlooked in the digging of evergreens, and that is pulling them up: they should be dug up and the soil shaken off very carefully in order to preserve the fine roots, which in red cedar are very fine indeed, and easily broken off. The central root is no use without them; but if the fine roots are preserved and trees properly planted, they start at once and need no shade.

BY M. VINCENT, LE MARS.

NORTH-WEST.—A very good way to observe Arbor Day would be for the teacher to have each scholar set out a tree or shrub and then take care of it during the season. Let this custom be followed each year, and let there be

an interest awakened on the subject. I would have all trees furnished at public expense and made the teacher's business to see that they were not destroyed after being planted. In this way the school ground would ere long become a place of beauty instead of, as is too often the case, a plat of ground overgrown with weeds, except where worn smooth with feet in play. I think much good might result from such planting. I would also have a day set apart for general planting, and encourage it by offering premiums for the best grove of trees, such as walnut, ash, elm, locust of the thornless varieties, and such as are likely to be more valuable in the future than cottonwood, box-elder, etc., which may be very good to start with, but which do not make a good permanent grove. Then there are the evergreen, such as the Scotch, Austrian, white, and red pines, Norway and white spruce, white and red cedar. These trees are becoming so low priced as to be within the reach of all, and there is nothing more beautiful or valuable on any place than an evergreen windbreak in the winter time.

BY J. B. MITCHELL, CRESCO.

NORTH CENTRAL.—For this locality I would advise the planting of more hard maple, white ash, black walnut, and butternut. Soft maple, willow, and cottonwood have been extensively planted, and make a quick growth for

shelter, but have not the value or the beauty of the trees first named. For a street shade tree, nothing is equal to the noble hard maple. Many evergreens do well; the best are balsam fir, white pine, Norway and white spruce. Those planting evergreens for shelter as well as beauty cannot afford to dispense with those named. For ornamental hedges or single specimens, when sheared, nothing equals American arbor vitæ. Among fruit trees I know of no cherries or pears I can recommend; the De Soto plum is a success and should be more extensively planted. The Russian apples are well adapted to this climate, and the Duchess is already recognized by most nurseries, many of which charge a special price for it.

TREES FOR MISSOURI PLANTING.

BY CHARLES PATTERSON, KIRKSVILLE, MO.

As to desirable varieties for planting in school-house grounds, door-yards, or on roadsides, I can hardly go amiss among native forest trees, and have little inducement to seek further. The different varieties of ash, sugar and Norway maples, cannot be excelled in compactness, beauty, and resistance to winds and sleet, while the more straggling growth of soft maple, elm, and box-elder, could easily be made nearly equally resistant by timely cutting back. Linden and birch of all kinds would be

desirable for variety. Hickory, walnut, oaks, and chestnut are more difficult to transplant of desirable sizes. Among evergreens individual taste can safely be gratified, and one can accept any offered, excepting junipers and the Chinese section of the arbor vitæ.

I have transplanted trees eight to ten feet high, by carefully digging long roots and using the utmost caution to prevent exposure to drying wind or even light. Good roots are very important, and for that reason nursery-grown trees are preferable, and generally as cheap as if hunted, dug, and transported from the forest. A very important requisite in planting is to pound in the soil quite solid, after covering the roots well; then fill up the hollow with loose soil. As to reasons for planting I will only say that if children are allowed or induced to take part in planting, and certain trees assigned to each, their memories will, in after life, revert to them as one of the dearest spots on earth.

IN MISSOURI SCHOOL GROUNDS.

BY W. E. COLMAN, STATE SUPT. OF PUBLIC SCHOOLS, JEFFERSON CITY, MO.

In appointing April 6th as Arbor Day in his state Mr. Colman says: "If this subject is properly represented to the residents of the district by those interested in the edu-

cation of their children, every child will readily take part in the enterprise. Let the children plant and name their trees, and they will protect, guard, and cultivate them in the future. It may be argued that it will simply be labor wasted, as the teachers employed will not interest themselves in this matter sufficiently to protect the grounds from injury. Such teachers should not be employed, for they are not competent to instruct, govern, and train children; nothing more plainly portrays the qualifications and taste of a teacher than the condition of the fencing, out-houses, trees, and shrubbery on the school grounds. The teacher who has no taste in this direction is unfit to be placed in charge of children." He also gives some excellent advice as to the manner of observing the day in schools:

1. Select and dig the trees several days in advance, being sure to keep their roots moist by binding wet straw carefully around them and burying temporarily in the ground.

2. Select trees, straight and smooth, from one to two inches in diameter, cut top off at seven feet, and all limbs cut back to eight or ten inches.

3. The best trees are in order: Linn, ash, box-elder, elm, hard maple, sycamore, pecan, walnut, soft maple, and evergreens.

4. Carefully trim the growing trees of all broken and

straggling branches, and keep symmetrical. It is as necessary to take care of them afterwards, as it is to plant new ones.

5. Call the meeting to order promptly at 1:30 P.M., and devote one hour at least to orations, essays, poems, including historical sketches of noted trees mentioned in connection with our nation's history.

6. If there is no fence around the ground, make an effort to get a levy for that purpose, and at all events see that the trees are properly protected against injury, and mulched.

7. Have teacher or clerk report to the county commissioner or superintendent what was done, and what trees were planted out.

MISSOURI TREE NOTES AND LISTS.

BY SECRETARY GOODMAN.

STATE HORTICULTURAL SOCIETY'S LIST.—The failure last year, on account of the drouth, should not discourage us. We will never have trees unless we plant again. The best native forest trees: The elm, then the maple, then the ash and box-elder. If you can get them, and can afford it, get the sugar maple, tulip tree, or linn tree also. In cities, use the sycamore, it stands the coal smoke best. The best evergreens: Red cedar, Norway spruce, and

white pine. Plant in clumps of five or seven, and not in straight lines so much. Any reliable nurseryman will help you select well if you ask him.

BY ROBERT BRITTAIN, HALF ROCK, MO.

NORTH CENTRAL.—The best tested tree for Arbor Day here is the soft maple. It does best to plant the seed, and cultivate while young the same as corn, though they do well transplanted. The hardiest and best evergreen is the Scotch pine; we prefer those two to three feet high, which have been transplanted two or three times in the nursery, as it makes them safer to plant. They should be well cultivated after being reset.

BY CHARLES C. BELL, BOONVILLE, MO.

CENTRAL.—Arbor Day is, in my opinion, a work in the right direction, and your paper deserves much credit for taking "holt" of this work. I hope the time is not far distant when every state in this Union will observe tree planting and ornamentation on Arbor Day. The good resulting from tree culture, especially in the western states, is very great, and it may soon supply what is most needed (wood for all purposes), as well as affect the rainfall and protect us from the disagreeable winds. It will transform our western plains into habitable oases.

BY ROMMEL & SOBBE, MORRISON, MO.

EAST CENTRAL.—Your object is a very good one, which we should be very happy to see shortly introduced. Our suggestion would be, that every teacher be instructed to take his class and drill them, and with the idea once given to the youth, it would soon be a permanent fixture. Soft maple, box elder, or catalpa would be the most desirable here, being hardy and of quick growth.

ARBOR DAY IN MISSOURI.

BY L. R. TAFT, MISSOURI AGR. COLLEGE, COLUMBIA, MO.

The original purpose of Arbor Day was to encourage the planting of trees valuable for fuel and timber, on the bare plains of Nebraska and Kansas, hoping also that they would ameliorate the climate. As now understood, it is a day set apart by state legislatures for planting trees and shrubs in the public squares, streets, and especially in the school yards in the cities and towns, and throughout the country. The prime movers in the good work in Missouri, as well as in other states, were the members of the state and county horticultural societies. During the past two years they have been very active in this state, and through their exertions several normal schools and many public schools have changed the cheerless aspect of their yards by laying out pleasant walks and plant-

ing beautiful shade trees, evergreens, and shrubs. Arbor Day was first celebrated in Missouri April 15, 1886. But little was done, and work did not really commence until the spring of 1887. In March of that year the state superintendent of public instruction sent out a circular requesting the coöperation of the teachers and pupils, with their parents, in planting trees and decorating the school grounds. A list of the most desirable trees with directions for planting them was given, and the suggestion made that appropriate literary exercises form part of the programme of the day.

ORGANIZATION NEEDED.—The public must be aroused and interested in the work before Arbor Day can be made a success. The first step should be to call a meeting and appoint a committee to stir up those who did not attend. Posters should be invested in liberally and the aid of the press invoked, while effective personal work should not be neglected. The laying out of grounds and planting should be placed in charge of the committee, or better still, put in the hands of some competent and experienced person.

THE LAWN AND WALKS.—The grounds should first be graded and put in proper shape, and the graded portion covered with good surface soil. When the size of the yard will admit a well-kept lawn will add much to the appearance of the grounds. For seeding, blue grass,

with a small quantity of red top or R. I. bent grass, and perhaps a little clover, will be the best and least expensive mixture to use. No rule can be given for the laying out of the walks, as they will depend in great measure upon the position of the buildings, entrance gates, and the configuration of the ground. In general, if the gate is directly in front of the building, the walk should be straight and broad, but if at the corners, a gentle and natural curve may be made. If the site is newly graded the borders of the walk should be marked with grass sod well pounded down. The material for the walks may be asphalt, brick, plank, cinders, or gravel.

TREES TO PLANT.—No list can be given which will answer for all parts of a large state like Missouri, with its varied soil and climate, and it will be safest to select those which thrive best in the locality where they are to be planted. The following, however, are species which can be generally recommended: The American white and red elms, and several of the European elms, make excellent shade trees for large grounds, and where the size of the yard admits should certainly be planted. Box-elder is better for small grounds and is one of our best shade trees. Some of the native ash will be found valuable in all parts of the state. Of the maples the sugar easily takes first place. It is rather a slow grower at first, but in time becomes one of our handsomest trees. The soft or silver

maple is a rapid grower, and on this account is largely planted. For the first five years after being set out it makes a handsome tree, but the head soon becomes thin and open and the branches are easily broken by the wind. To keep it in good shape the tree should be cut back every four or five years. The Norway maple seems to combine the good qualities of the other maples without their faults, and is worthy of more general planting. In some localities the sycamore maple does well. The American and European lindens, or basswoods, are valuable, especially on streets. Their regular and symmetrical forms and their fragrant flowers place them well at the head of the list.

On bluffs and upland soils, the white, red, and other oaks thrive and deserve a prominent place in the collections, but are difficult to transplant. The sycamore is valuable for cities where the gas and coal smoke injure the more valuable kinds. Deciduous cypress, and if the grounds are large, nut trees, as the walnut, pecan, and hickory, and a few fruit trees, as the apple and plum, may be planted. Of evergreens, the Austrian, white and Scotch pines are valuable in the order named. To keep them in shape the leading shoot on each of the branches should be removed each year after the tree has reached a height of four or five feet. Among the arbor vitæ the Chinese best withstands our hot, dry summers, after which come the

Siberian and American. The Norway, white, and blue spruce are handsome while young, but the branches begin to die out and few of the trees reach their full age. Red cedar is easily obtained and answers better than none at all. A few shrubs such as forsythia, flowering almond, Japan quince, spirea, lilac, honeysuckle, syringa, hydrangea, and althea can often be made use of to good advantage.

TREES—WHERE AND WHAT TO PROCURE.—Many trees can be dug in the woods, but nursery grown stock will be more likely to live, and can often be bought of a nurseryman at mere nominal prices; or if he does not have them he will secure them elsewhere at low rates. Trees should not be too small for planting in school yards. Care should be taken in digging the trees to leave as many roots as possible and not permit them to become dry. Most trees should be topped at a height of eight or ten feet, and the branches cut back to about a foot in length, to make a well-shaped head.

ARRANGEMENT, GROUPING.—In locating the position of trees and shrubs, opportunity is given for the display of considerable skill and judgment. Only general rules can be given: 1. For a wide street they may be planted six or eight feet from the fence, outside; for a narrow street four to six feet, inside. 2. Except when planted in relation to straight lines of boundaries, walks or drives, no

three trees should be in line. 3. To leave as much of the lawn unbroken as possible, the trees should be grouped together in clumps, and not close enough to overshadow buildings when grown. 4. Evergreens and shrubs should also be grouped, and can fill up the angles or curves in walks.

PLANTING.—For permanence, small growing trees should be planted twenty feet apart, large growing trees like the elm, thirty-five or forty feet. The holes in which to plant the trees should be large enough to admit the roots, and if the soil is stiff and clayey, should be made still larger and deeper and filled up with fine surface soil. The tree should be set in the hole and the soil carefully worked round the roots and firmly pressed down with the feet. A thick layer of straw or other mulch should be placed around the tree for a space of at least five feet to prevent drying out of the soil. If properly mulched, watering will not often be necessary. The “little and often” plan is a poor one. When water must be applied give enough to saturate the roots and it will answer until the surface soil is dry again.

PROTECTION.—In very dry summers the tall bare stems of the trees are dried out, causing what is known as “sun scald.” To prevent this it is sometimes necessary to fasten a V shaped trough on a six-inch board against the southwest side of the tree for shade during the heat of the day.

The school ground should be fenced, but if not, the trees should be protected in some manner from stock. The groups can be surrounded by a single barbed wire paling, while solitary shade trees can be protected by four stout stakes and barbed wire. A neater method is to box trees, using two strips of boards six inches wide, with open slats for the other two sides.

MAKE PREPARATIONS IN ADVANCE.—When there is much grading and seeding to be done, let it be performed in advance. Then, with the lawn made, walks laid out, holes dug, and the trees ready on the ground, Arbor Day can be devoted to literary exercises, and the simple planting of the trees. If but little preparation is required, it can be done in the forenoon, and the afternoon then given over wholly to suitable exercises.

While the directions given are for the ornamentation of school sites, they apply, in a general way, to the beautifying of public and private grounds. The subject of street planting has, perhaps, not received sufficient attention. Streets set with shade trees not only promote the pleasure and comfort of the citizens, but are attractive to visitors.

ARBOR DAY IN MONTANA.

Governor Leslie has appointed April 17th as Arbor Day, and the people will undoubtedly observe it in a

creditable manner. In many localities it will be useless to plant trees, unless they can be irrigated. Young pines will not grow in what are termed "alkali lands." The *Montana Live Stock Journal* gives the following list of native trees and shrubs, many of which grow with little moisture, and will not need to be irrigated, except under very unfavorable conditions: Yellow pine, bird's eye pine—a slender, straight, and tall tree, with white, rather hard wood, and finely marked with bird's eye curls—mountain white pine, Douglas fir, Engleman's spruce, white spruce, subalpine fir, red cedar, balsam poplar, balm of Gilead, Columbia poplar, cottonwood, American aspen, black willow, shining willow, mountain willow, diamond willow, western birch, box-elder, mountain maple, mountain alder, smooth alder, wild red cherry, choke cherry, wild service, mountain mahogany, buffalo berry, and a large number of shrubs and vines, and several varieties of currant, gooseberry, raspberry, and other wild fruit-bearing bushes.

ARBOR DAY IN MINNESOTA.

BY C. L. SMITH, SECRETARY OF THE MINNESOTA STATE FORESTRY ASSOCIATION, MINNEAPOLIS.

Arbor Day has been observed in Minnesota for twelve years, and though not fixed by law, a day is appointed each year by proclamation of the governor. Its observ-

ance has not been general, but its influence has been beneficial in attracting attention to the subject at a season when trees can be planted. In many of the prairie districts the farmers have observed the day and planted thousands of trees. The most pleasing feature of the work has been in connection with the public schools in country districts. In a few instances country towns have taken hold of the matter and made it an interesting holiday, planting trees along the streets, in parks, school yards, and private grounds. In 1886, our state superintendent of public instruction, Kiehle, sent out a circular to county superintendents and high school principals, calling attention to Arbor Day, and urging them to give the matter due attention, suggesting readings and recitations on the subject of trees, plants, and flowers. I secured 1,250 copies of this circular, and enclosing them with our "Forest Tree Planter's Manual" (a book of over 100 pages treating of the planting and care of trees), sent them to the teachers of 1,250 district schools, in the prairie districts, with a letter calling their attention to the governor's proclamation recommending the observance of Arbor Day. They were asked to devote one reading lesson each day for a week to the subject of trees, their climatic influence, fuel and timber value, methods of planting, and how to propagate them. They were requested to give an account of what was done, if anything. Many replies were

received of an encouraging nature. One county reported over 180,000 trees planted, and one 800, and letters from school districts showed trees planted on the school grounds.

All the reports agree in that the children take a lively interest in the matter—making collections of woods, leaves, seeds, etc., and learning the names of trees, plants, and flowers. We have abundant evidence that the influence of the start in district schools has been carried to the homes and greatly stimulated interest in tree planting. Last year, for the first time, I succeeded in having Arbor Day observed by the public schools of Minneapolis. Reading and talks on the subject for several days had awakened an interest among the children; many committed to memory short selections or recitations. The park committee furnished trees for planting at the various schools, and they were set out with appropriate exercises, songs, and short speeches. That the children were interested is shown by the fact that they are already inquiring whether we are to have an Arbor Day celebration this year. Unfortunately our association is without money, and therefore unable to do very much in the matter. The governor has set Saturday, April 28th, for Arbor Day, and although short of funds we shall endeavor to make its observance more general than ever.

DIGGING AND PLANTING EVERGREENS.—Mr. Smith also sends the following directions on this subject: Have a sharp spade. Prepare a puddle of mortar made with clay and water about the consistency of thick whitewash. In digging save all the roots you can. Dig a tree and then puddle the roots in the mortar and put the tree out of reach of wind or sun. The sap in the root of all evergreens is easily coagulated by either sun or wind; once coagulated it can never be restored. Never dig an evergreen and leave it for one minute exposed. In transplanting keep cool and moist. In setting, straighten the roots smoothly, and carefully work the fine soil firmly about the roots. Be very particular to pack it firmly against the under side, close up to the center; this should be done with the fingers. When the roots are all covered, the balance of the soil necessary to fill the hole may be firmed down with the foot. Mulch freely with hay or straw for about three feet around the tree. The mulching should always be deep enough to keep down weeds and grass and keep the ground moist. This mulching should be renewed from year to year, and then the trees will always look green and healthy, grow rapidly, and abundantly repay care and attention. Neglect of one single item of care may ruin all.

OHIO TREE NOTES.

BY M. CRAWFORD, CUYAHOGA FALLS.

NORTH-EAST.—The favorite shade trees in this locality are the hard maple, soft maple, and elm. The principal objection is that they send their roots so far in search of food and moisture that they rob the crops growing near them. The street trees damage many of the town gardens in this way. This does not seem to be the case with the black walnut, and in consequence many of them are being planted. A large elm will send its roots over 300 feet, and when they find a rich flower bed they quickly utilize it. In many cases it will pay to cut the roots just inside the fence and make them to get their living in the street. As in good soil they sometimes grow ten feet in a single season, they will thus have to be root-pruned annually.

BY J. F. BOWMAN, CLARK COUNTY.

THE NORWAY MAPLE.—The Norway maple, *Acer platanoides*, is perhaps the most valuable and attractive deciduous tree for street or ornamental planting. It will endure a temperature of 30 or 40 degrees below zero and is perfectly hardy. It grows slowly the first two or three years after being transplanted from the nursery. The tree forms a very handsome "head;" the leaves are large, glossy, and a beautiful green, varying from light to dark in different individuals, thus making a beautiful contrast.

It is little known in this country, and has not received the attention it deserves. One reason is, that it is difficult to produce trees large enough for street planting in less than four or five years. Nurserymen prefer trees of more rapid growth. As its value becomes better known and the demand for it increases, nurserymen will give more attention to its propagation. Other maples are sometimes supplied to those who are unacquainted with the Norway maple. We bought a lot a few years ago claimed to be Norway maple, but on comparing them found them very different from our European importations, freezing down to the snow line every cold winter.

IDAHO ARBOR DAY.

The recent legislature enacted by statute: "That the last Monday in April in each year is set apart for and declared to be a legal holiday in Idaho territory, to be known as Arbor Day, so declared for the purpose of encouraging the planting and setting out of trees in said territory." Steps are being taken by the schools for its proper observance, and the children will be encouraged to take part in the exercises. The rapid, and too often wanton destruction of large tracts of timber in former years has already produced disastrous results in the valleys of Idaho, and the snow melting from the mountains goes off

in a flood with the first warm weather, instead of by degrees, supplying the mountain streams all through the summer. The time is coming when every drop of water in the streams of Idaho will be utilized for irrigation, and therefore the sources from which water is supplied should be guarded and preserved. Monday, April 30th, will be generally observed in the schools.

ARBOR DAY IN NEW YORK.

The destruction of the magnificent forests of the Adirondack mountains is already affecting the Hudson river quite seriously, and steps are now being taken to preserve what remains. At the present session of the New York legislature a bill was passed providing that "the children of the public schools shall be assembled on the first day of May, and be instructed by their teachers in planting, care, and preservation of trees."

BY W. & T. SMITH, ROCHESTER, N. Y.

Arbor Day should have been made May 1st [It is in New York state.—ED.], and at the same time in all the states. Most of the nursery stock to-day is sold through agents; in fact *all* of it. It is impossible for nurserymen to ship agents' orders before April 15th to 20th; it then takes seven to ten days to reach destination. Should it be

universally made May 1st, all could celebrate the day, and trees and shrubs arriving before that time could be heeled in to be planted on the appointed day.

WISCONSIN ARBOR DAY.

BY G. P. PEFFER, PEWAUKEE, WIS.

Although talked about in the state and county horticultural societies for a dozen years, no day has been fixed in this state for Arbor Day. Our spring is so variable it would be difficult to decide beforehand on a day. In 1878 our legislature passed laws in relation to tree belts and naming trees to plant, exempting land so planted from taxes and allowing a bounty each year after the trees had attained a certain size. Though this law has been in force ever since its passage, I have not heard of a single tree belt being planted under its provisions. The appointing of Arbor Day by the governor would be a good thing. It would give the children of our public schools opportunity, especially in the country, to plant trees and shrubs, and receive instructions from their teachers how to take care of them, the trees to be called their own. They would never forget it as long as they live, and thereafter when mention should be made in the papers about trees, their uses and benefits, effects on climate, etc., they would be interested. The following trees are recommended by

the state for shelter belts and forest tree planting: Arbor vitæ, ash, balsam fir, basswood, beech, birch, butternut, cedar, black cherry, chestnut, coffee tree, cucumber tree, elm, hackberry, hemlock, hickory, larch, locust, maple, oak, pine, spruce, tulip, catalpa speciosa, and walnut. The best varieties of fruit, adapted to our state, for hardiness, productiveness, and quality are: Apples, best seven varieties, Duchess of Oldenburg, Wealthy, Fameuse, Talman's Sweet, Wolf River, McMahon's White, Yellow Transparent. In addition, for special locations: Fall Orange, Utter, St. Lawrence, Alexander, Westfield, Seek-no-further, Fall Spitzenburg, Tetofski, Red Astrachan, Golden Russet, Pewaukee, Clark's Orange, Walbridge, Longfield, Haas, and Willow Twig. Crab apples for general cultivation: Whitney's No. 20, Gibb, Thompson, Hyslop, Transcendant. Pears: Flemish Beauty, Peffer's No. 3, Winter Nellis, Besimianka, Early Russian Bergamot. Plums: De Soto, Forest Garden, Early August. Cherries: Early Richmond, Kentish, Morello. Currants: White Grape, Red Dutch, Hay's Prolific. Gooseberries: American, Downing, Houghton, and Mountain. Grapes: Moore's Early, Worden, Concord, Brighton, Delaware. Of berry bushes there are many sorts now cultivated, and almost every locality has its favorites. The one which gives the most satisfactory returns should be selected in every case.

HARDY ORNAMENTAL SHRUBS.—Snowball, syringa, white, purple, and Persian lilac, upright honeysuckle, fringe or smoke tree, barberry. Hardy climbers: American ivy, bitter sweet, virgin's bower, fragrant and scarlet honeysuckle. Roses: (with protection) Queen of the Prairie, Gem of the Prairie, Baltimore Belle. Moss Roses: Princess Adelaide, Luxemburg, etc. June Roses: Persian, Yellow Harrison, Cinnamon. Hybrid Roses: Gen. Jacqueminot, La France, Gen. Washington, Madame Plantier. There are also quite a number of other varieties which might be recommended.

It is a mistake to plant too many varieties, and just as great a one to plant too few. Always select good, healthy stock; old and stunted trees are unprofitable. Do not make the mistake of planting a tree or shrub in a post hole, or in very poor soil, or in June grass sod. Make a good-sized hole, and if the soil is poor fill in with better or mix well with compost. Do not make a mound close to the body, but have the ground higher two or three feet away, so as to form a basin and collect the water when it rains. [In the fall the basin should be filled up—ED.] If mulch is used, treat it in the same way. We must not think that trees once planted will take care of themselves, or can be "turned out to grass." They need just as good cultivation as a crop of corn, potatoes, or vegetables for the first three or four years. A tree needs extra attention

when on poor soil, and, like pigs and cattle, needs occasional feeding.

TREES FOR ARBOR DAY.

BY GEO. J. KELLOGG, JANESVILLE, WISCONSIN.

Every school district and college throughout the land should observe Arbor Day by the planting of trees, and in some cases by the removal of objectionable ones in too close proximity to buildings. There are places where the school-house stands in a natural grove. In such cases it is as necessary to remove a portion as to plant on the bleak prairies; but do not clear them all out. Let there be enough saved to border the lot, with an occasional tree in the midst of the grounds, but remove the trees near the house and let in sufficient sunlight. In improving the school lot in the country, let committees be appointed, and let family join with family in each planting a tree. Have special plantings recorded in a book kept for the purpose by the clerk of the district, and let the school board decide what varieties shall be set out. Give volunteers from the children a chance to make memorable the day, the occasion, and the grounds, by each planting a tree. In other cases, let classes or teachers have that privilege. These plans might be modified for school lots, which ought to be provided for at public expense, but often there are chances

for classes, as at colleges, to plant some tree or shrub in some portion of the grounds on this day. In case of churches, the trustees should see that Arbor Day be improved by planting shade trees all about the lot, and keeping them in good condition by removing and replacing, as the occasion may require.

WHAT TO PLANT.—In recommending varieties there is a great diversity of opinion; there are some adapted to all sections. Nothing can take the place of the white elm, but they should not be nearer than twenty-five feet, and for street planting forty feet is better. The hard maple is king among trees and cannot be extolled too highly. The ash comes nearer the hard maple than any other tree, and the linden is queen in the forest and suitable for all locations; and yet, when the soft maple leaf louse troubles the maple and box-elder, it will restrict the planting of the basswood unless the leaf louse has entirely disappeared. An elm at each corner of the lot and the rows filled between with alternating hard maple, ash, catalpa, hickory, or linden, any of which would make nice trees, and for variety and contrast would be acceptable. For the school lawn there is nothing equal, for a single tree, to the cut-leaf weeping birch. For screens to outbuildings nothing is so good as the American arbor vitæ, which can be better planted at eighteen inches to two feet high, than larger; yet where contiguous to a nursery, trees can usu-

ally be procured six feet high, and if care is used no loss need occur.

THE BEST WAY TO PROCURE TREES for Arbor Day, when possible, is to go direct to the nearest nursery, see them properly dug and carefully handled; never let a small root dry. All shade trees may be pruned to a bare pole, cut off at uniform height, or if not too tall, leave the central shoot uncut. When suitable ones can be procured, trees may, with care in digging, be taken direct from the forest. Where the ground is hard, with a tough June grass sod, it will be difficult to plant and insure growth unless great pains is taken. The sod should be removed three inches deep, four feet across, the first spade deep of earth laid out, and the second spade depth inverted, and the top spading used in planting the tree and filling up, and the sod may be inverted on top of four inches of straw, manure, chips, or sawdust, which will answer for a mulch. Care must be used to pack the earth firmly about the roots, using a little water to fill in while planting. Every tree must be protected by 2x4 inch upright posts with boards across—for school children will romp and play, and catch hold of and twist them out of shape; they must be protected. In the treeless portions of the Northwest, where trees cannot be procured, nuts from nut-bearing trees should be secured this fall for fall planting, among which I would mention all the oak

family which are hardy, black walnut, butternut, and hickory; and while waiting for these, plant willow and other similar tree cuttings.

When district boards are ordering from a distance, I advise them to buy six to eight feet young trees. They will be more likely to live and be much less expensive. For screens or front line or division fences get arbor vitæ which have been well transplanted and are two feet high. Whatever you plant, dig the soil from two to three feet *on each side of the tree, mulch thoroughly*, protect the trees, and let no sod form about them for three years. The trunk of each tree should be bound up four feet at planting time with marsh hay for shade, and so the borer will not deposit his eggs the first season. Street trees should always be planted outside the sidewalk.

INDIANA TREE LISTS.

BY C. M. HOBBS, BRIDGEPORT, IND., SECRETARY OF THE STATE
HORTICULTURAL SOCIETY.

FOR THE STATE.—Would recommend the following list of trees for planting on streets and in public grounds in Indiana. They are all native to the state, and easily obtained, generally hardy and easily transplanted. To this list might be added other native and foreign trees, quite as desirable, but it is not best to have the list too long,

as it is more confusing than helpful to the inexperienced. Arbor Day has done much for Indiana, and we hope to see it do much more. List of trees: Sugar maple, silver or soft maple, elm, ash, catalpa speciosa, linden or basswood, black walnut, poplar, or tulip trees. Evergreens: Norway spruce, hemlock, white, Scotch, and Austrian pines, and American arbor vitæ. The Carolina poplar is quite extensively planted as a shade tree.

BY H. S. STINE, BURNETT'S CREEK, IND.

NORTH-WEST.—For Arbor Day, and especially for trees for school-house yards, etc., I would recommend the following, taking into consideration hardiness, symmetry, and cleanliness of foliage, viz.: The sugar maple, white ash, black walnut, black locust, sycamore, soft maple, and Russian mulberry.

ARBOR DAY IN DAKOTA.

Great interest is being taken in Arbor Day in Dakota, and it will be almost universally observed. This is not to be wondered at, as no section will derive more benefit from the planting of trees. The Arbor Day committee, appointed at the December meeting of the Dakota Horticultural Society, recommended Wednesday, April 25, as Arbor Day for that part of the territory lying south of

latitude 47, and Thursday, May 5, for the part north of that parallel. They also urge city councils, boards of trade, town officers, school boards, and others in authority to take steps for the local observance of the day. Every citizen is urged to plant at least one tree as a memorial of the day. They recommend for street planting: White elm, box-elder, and hard maple. For parks and farms: Cut-leaved weeping willow, European white birch, laurel larch, English and American larch, mountain ash, blue spruce, white elm, white ash, and box-elder. Cottonwood is much planted for a quick-growing tree, but considerable difficulty has been experienced the last three years in getting cuttings to grow, and those having experience recommend cutting thrifty shoots, tying in bundles, and throwing in water to soak five or six weeks, until the buds begin to start, before planting, which will be about the twentieth of April.

THE NATIVE TREES of Dakota which will be sure to grow under almost any conditions are: Elm, cottonwood, and willow on low ground, and native ash (*Fraxinus viridis*) and box-elder on the high prairie. The pure, dry atmosphere, lack of snow in winter, and hot, drying winds of summer, make it difficult to grow hard maple and many other kinds of trees which are not used to a rigorous climate. With the planting of trees will come a change of climate, which will make it safe to set out a

much greater variety than is now possible. The extensive planting of trees will be of very great benefit, outside of their money value, preventing the snow from all drifting into the hollows in the winter, and arresting the drying winds of summer, and thus materially aiding in changing the climate.

ROADSIDE PLANTING.—The *North Dakota Farmer* gives the following from an old tree planter for setting trees along roadsides:

“Plow two furrows, turning the sod in opposite directions, leaving a land furrow; loosen the soil in the bottom of this land furrow by one or two more shallow furrows, so as to get enough mellow ground for convenience in planting the trees; set the trees in the center of this land furrow, mulching heavily then with straw, hay, or coarse manure, taking care that the mulch does not come in contact with the trunk of the tree. Look out for fire protection in fall and spring. The mulching is a substitute for cultivation, but the mulch must be heavy enough to choke out all weeds.”

The growth of many kinds of trees is very rapid, especially when the weather is favorable and the trees receive good treatment, and is all the way from two to eight feet in a single season. Good reports for Arbor Day may be looked for in all parts of the territory.

NOTES ON ARBOR DAY IN MICHIGAN.

WHERE, HOW, AND WHAT TO PLANT.

BY PROF. L. H. BAILEY, AGRICULTURAL COLLEGE, MICH.

The tree or bush which is planted by the child should remain as a memorial of the child's effort. The young mind becomes attached to the plant as a property peculiarly its own, and the early love and interest is likely to remain, to some extent, through life. But here we are met with a serious question: If Arbor Day is to return each year, and each person is annually to set a tree which shall remain until it dies, where can places be found to plant all the trees? Already, in states which inaugurated Arbor Day some years ago, there are door-yards and school grounds overfull of trees. A few suggestions may be helpful in this connection: *Do not plant too thickly in the home grounds!* Thick planting is an evil which few people appear to comprehend. Trees which are crowded not only lose their own beauty and destroy the symmetry of neighboring trees, but they produce about residences a shade so dense as to be unhealthful. The persons are few who possess sufficient courage to remove large trees, even though fully aware that the trees are useless and injurious. Forty feet is very close for trees of large species which are to be grown for the beauty of the individual specimen.

WHERE SHALL WE PLANT?—1. *Home grounds first.* Plant in such a manner as to screen the house somewhat from the street. Plant also so as to partially hide the barn. Cover by trees or bushes all unsightly objects, as outhouses, etc. Plant the coarser trees at the farthest points from the residence. Do not plant the trees in rows unless it is desired to have a windbreak.

2. *The school grounds next.* Nine out of ten, or even more, of the school premises of the country districts are a disgrace to the community. Glaring outhouses, shameful fences, absence of attractive trees and shrubs, forbidding bareness, too often characterize the district school. No wonder that so many children have a dread of school.

3. *The roadsides.* Many country roads are even worse than the school grounds. Were it not for the fact that the roadsides are usually neglected, our country highways would be "things of beauty." Every land-owner should have his roadsides planted.

4. *Groves on barren hills and in large pastures.*

WHAT SHALL WE PLANT?—1. *Largely of native plants.* They are cheap, hardy, vigorous, most likely to succeed under neglect. They are attractive and important. They should be preserved from the general devastation of natural forests. Plant in great variety. Every forest tree and bush is attractive when given a chance.

2. *Plant many shrubs.* There is no reason why the

planting of shrubs should not be included in Arbor Day. The native bushes are much neglected. They make attractive screens and covers for bare and unsightly objects. They break up the monotony of a lawn more completely and satisfactorily than trees of the larger sizes can do.

3. *Exotic trees or shrubs.* When these are planted, select the best known.

HOW SHALL WE PLANT?—1. *The shrubs* in groups irregular in outline.

2. *The trees* in groups or long belts along many roadsides and in large grounds. These groups can be managed easily in the crooks and about the corners of roads, where they will add greatly to the beauty of the highway. Mix in many kinds, in some cases using bushes about the borders. Along straight and level highways trees look best in rows. By planting in groups in roomy places the trees may be set closer together than in lawn planting, for we aim at the effect of the whole group rather than that of a single tree. The groups themselves, however, should not be crowded.

MICHIGAN TREES.

BY E. H. REYNOLDS, MONROE, MICH.

I have been engaged in the nursery business here nearly fifty years. Our little city of about 6,000 is nicely

shaded, and is sometimes called the "Floral City." I have set out at least 500 trees by the wayside. The principal trees planted on the streets are elm, soft and hard maple. After many years of experience, the hard maple is my preference, and it is most called for. The horse chestnut is a very fine shade tree in any locality, and there are many other shade and ornamental trees which will do well if properly cared for.

ARBOR DAY IN LOUISIANA.

BY M. VINCENT, ST. CHARLES, LOUISIANA.

This is a question which has not as yet received much consideration in Louisiana. With our almost inexhaustible supplies of timber, we do not stop to think that it may not be more than fifty or one hundred years before our now immense forests may be cut down. Timber is an absolute necessity that the climate may be such as to produce the best results from the soil. Hence, every man in opening a farm in Louisiana should plant a part of it to trees.

Among trees which will in the future be valuable, not only for wood, but for the production of a steady revenue, are: Soft shelled pecan, English walnut, black walnut, and butternut. Interspersed with these may be grown for ornament the magnolia, with its magnificent

blossoms that perfume the air to a great distance. In addition to these, the pines which are native to the country may be grown; also oaks, all varieties of which flourish here.

PENNSYLVANIA ARBOR DAY.

BY SAMUEL C. MOON, MORRISVILLE, PENN.

Tree planting with an idea of creating timber tracts has not yet been practiced to much extent in this section, because the country is naturally well wooded and generally with valuable kinds, and cleared land is considered too valuable for anything but pasturage or tillage. There are, however, on almost every farm, steep hillsides or rough, stony corners, which could be more profitably utilized by growing trees, either fruit or timber, than in any other way. White oak is our most valuable native tree, but it requires a century to raise a crop of them, and few Americans want to look so far ahead for returns of their labor. Chestnut is probably the most profitable timber tree, as it grows large enough for rails or wire fence posts in ten, and attains maturity in forty or fifty, years. Chestnuts cut in winter sucker from the stump, and are thus perpetuated indefinitely. I think it is not too sweeping to say that every farm house should have some evergreens about it. It has been said that the

“tasteful and judicious planting of fruit and ornamental trees enhances the value of real estate more than an equal amount of money invested in any other way.” For the proof of these statements it is only necessary to observe the difference in appearance of farm houses in any neighborhood, particularly on a windy winter day. An unsheltered house looks very cold and uninviting at such times. Those who have not experienced the benefit of an evergreen windbreak can but little appreciate its value in subduing the force of a gale and the additional comfort thereby contributed to a country home. Not only houses, but many barns and stables would be made much more comfortable if the force of the wind was broken by one or more evergreen trees on their cold quarter. It does not necessarily require many, nor need they be very close together, but may be set with an eye to convenience or artistic effect. The best varieties for the purpose are Norway spruce, hemlock, white pine, Austrian pine, and American arbor vitæ. Those who want something more elegant for a lawn may plant Nordman’s silver fir, which is one of the very finest hardy evergreens that we have in cultivation.

Joseph W. Thomas & Son, King of Prussia, Pa., write: The best trees to plant in our locality are Norway, sugar, and Wier’s cut-leaved maples, pine, oak, purple and other beeches, and white birch. For low, rather wet ground, I

would recommend scarlet maple, oriental plane, and Carolina poplar.

SETTING GOOD EXAMPLES.

EACH ILLINOIS STATE OFFICER WILL PLANT A TREE ON ARBOR DAY.

The state officers have concluded to give Arbor Day a little boom, and each of them will set out a tree about the state house grounds. Gov. Oglesby will plant an elm, getting the tree and digging the hole himself. Secretary of State Dement will plant an elm; State Superintendent Edwards and Attorney-General Hunt each a hard maple; Supreme Court Clerk Snively an old hickory; State Treasurer Tanner a sycamore from the Wabash; Auditor Swigert a larch; Dr. Wines, secretary of the state board of charities, an elm; Appellate Court Clerk Jones, an elm; Adjutant-General Vance a larch; Supreme Court Reporter Freeman, a hard maple; Secretary Lord, of the board of labor statistics, and Dr. Rauch, of the state board of health, each an elm; and C. F. Mills, secretary of the state board of agriculture, a box-elder.

NEBRASKA CITY "DAILY PRESS" ARBOR
DAY EDITION.

The Nebraska City *Daily Press*, deciding to issue an Arbor Day edition on Nebraska Arbor Day, April 22, 1888, the editor, H. L. Wood, Esq., by correspondence obtained expressions from prominent appreciative persons in various parts of the United States, relating to the day and its author. We are permitted to make extracts of the following more important letters:

FROM JAMES RUSSELL LOWELL.

DEERFOOT FARM, SOUTHBOROUGH,

March 25, 1888.

DEAR SIR—I thank you for the opportunity you so kindly offer me of uniting my thanks with those of others to Mr. Morton on the 22d of April. I heartily wish all our newspapers could be as usefully employed on that day.

Our Teutonic ancestors, if they did not worship trees, at least held certain species of them sacred, and made votive offerings to them on certain days of the year. In this vegetable hagiology the oak and the beech held the first places, for the frugal reason, perhaps, that their mast furnished a gratuitous food for swine, the chief wealth, one may assume, of these dwellers in the primeval forest. If the Aryan races migrated westward from Asia, they prob-

ably brought this cult with them, for there, also, trees are looked upon with religious veneration. The Greeks, in this, as in other things, had a more imaginative faith, and associated the lives of superhuman, though not immortal, things with those of trees.

I willingly confess so great a partiality for trees as tempts me to respect a man in exact proportion to his respect for them. He cannot be wholly bad who has a sympathy with what is so innocent and so beautiful. But quite apart from any sentimental consideration, the influence of trees upon climate and rainfall gives to the planting of trees, and to the protection of them where nature has already planted them, a national importance. Our wicked wastefulness and contempt for the teaching of science in this matter will most surely be avenged on our descendants. Nature may not instantly rebuke, but she never forgives the breach of her laws.

I am glad, therefore, to join in this tribute of friendly gratitude to the inventor of Arbor Day. I think that no man does anything more visibly useful to posterity than he who plants a tree. I should answer the cynic's question, "What has posterity done for me that I should do anything for it?" by saying that it is all the pleasanter to do something for those who can do nothing for us.

Marco Polo relates that the great Kublai Khan planted trees the more willingly because "his astrologers and

diviners told him that they who planted trees lived long." Let me hope that this may prove true in the case of Mr. Morton.

Faithfully yours,

J. R. LOWELL.

MR. H. L. WOOD,
Nebraska City, Neb.

FROM GEORGE H. BOKER.

PHILADELPHIA, April 11, 1888.

DEAR MR. WOOD—It would be impossible in a brief note to do justice to the service rendered to the country, particularly to the great West, by the Hon. J. Sterling Morton, in suggesting and putting into practical operation the systematic planting of trees on the day to which he gave the happy title of "Arbor Day." How strongly the movement commended itself to the popular sense has been proven by the fact that since Mr. Morton made his motion in Nebraska, almost every other state in the Union has appointed a day for the same purpose.

Nor has "Arbor Day" been a mere sentimental dedication. Mr. Morton's recommendation has been put into practice on every hand. Even in this city, among people who live upon bricks and stones, and therefore have but dim rural ideas, on "Arbor Day" crowds of our citizens may be seen thronging into our park, saplings in hand, for the purpose of supplying its unshaded places with what, in

the future, will form beautiful groves of trees, as well as imperishable monuments to the honor of J. Sterling Morton.

No instructed agriculturist is unacquainted with the ameliorating influence on climate, rainfall, freshet, wind-storms, etc., produced by the liberal planting of trees on waste lands; the cheering thing has been that the same wise ideas have crept into the minds of our people and made them set resolutely to work in carrying out the simple, practical, and benignant suggestion of Mr. Morton.

An essay might be written on this topic by any thoughtful man acquainted with the phenomena of meteorology, and if Mr. Morton's plan shall be persevered in by the whole country, nature herself will write that essay in beautiful style before a quarter of a century is passed.

I regard Mr. Morton as one of the greatest benefactors of his race; for I understand that his noble idea is spreading beyond his own country; and that not only in the planting but in the sparing of growing trees there has been a universal change of opinion. Blessed be the man who brought all this about! I beg to join with you all in the congratulations that may be offered to this friend of humanity on his birthday, which was a happy day for the world into which he was born.

Yours sincerely,

GEORGE H. BOKER.

FROM JOHN BOYLE O'REILLY.

BOSTON, April 9, 1888.

EDITOR NEBRASKA "PRESS"—Your purpose of honoring the man who has originated the beautiful and beneficent practice of systematic tree planting is of interest to every one who loves nature and knows enough to thank God for giving us all an opportunity of increasing his blessings. The best and highest thing a man can do in a day is to sow a seed, whether it be in the shape of a word, an act, or an acorn. Last year, on less than half an acre of ground, at my summer home by the seaside at Hull, I planted 227 individual lives, of creeper, shrub, and tree. All through the winter, from the city, my mind reached out, as it were, to observe and care for the young things in their strange soil. Last week I went to see them, and Mr. Morton will know the thrill of pleasure, unlike all other pleasures, which came from the signs of health and growth in the plants.

I thank you for allowing me to express my admiration for a man who has started one of the loveliest practices of the country and century.

I am, respectfully yours,

JOHN BOYLE O'REILLY.

FROM JOHN BURROUGHS.

WEST PARK, N. Y., April 8, 1888.

EDITOR NEBRASKA "PRESS"—It is not very long since, especially in the eastern states, when the enemy of the tree was considered the friend of the human race, but the time has now come when the friend of the tree is the friend of the race.

Mr. Morton deserves the gratitude of the whole land. How many naked spots on this vast continent will be clothed in verdure by reason of his happy suggestion. The birds and animals, as well as the people, profit by his wise forethought. Every tree planted upon this day will serve to keep green his memory. I send my congratulations.

Very sincerely,

JOHN BURROUGHS.

FROM J. T. TROWBRIDGE.

ARLINGTON, MASS., April 2.

EDITOR OF THE NEBRASKA "PRESS": DEAR SIR—
If, as has been wisely said, he is a public benefactor who causes two blades of grass to grow where only one grew before, we well may honor the man to whom his country will owe, in the near future, so many beautiful groves, and orchards, and trees, blessing with their shade its village streets.

J. T. TROWBRIDGE.

FROM MAURICE THOMPSON.

CRAWFORDSVILLE, IND.,

April 8, 1888.

MY DEAR MR. WOOD—Your letter of the 26th of March is just in hand, owing to my three months' absence from home. I was ill, and no letters save those of a pressing official nature were sent to me.

How glad I should have been to respond to your request if I had been able!

The occasion you mention is deeply interesting to me, and I hope it will be impressively celebrated.

I send every good word and every good wish, and I sincerely hope that the founder of Arbor Day will live to enjoy many and many a pleasing return of the day, with the love and honor of his neighbors and of his distant friends.

Very truly yours,

MAURICE THOMPSON.

FROM EDWARD EVERETT HALE.

39 HIGHLAND ST.,

ROXBURY, MASS., April 6.

DEAR SIR—I am certainly one of those who wish to recognize the services of Mr. Morton in the forestry work, and I thank you for giving me an opportunity.

I could wish that the *Press* and those who write for it could consider a plan which seems to me very important in the forestry movement.

Most of the states have sinking funds with which to provide for debts not yet due. It would be a simple and wise policy for a state to invest a considerable sum annually from its sinking fund in forests. Individuals hesitate about a form of investment which does not pay for many years. A state need not hesitate, because it does not need the money for many years. A state has also the power to make and enforce the laws which will protect its forests.

With great respect,

Yours truly,

EDWARD E. HALE.

FROM FRANCIS PARKMAN.

BOSTON, April 2, 1888.

DEAR SIR—The practice of systematic tree planting is a most excellent one, and those who have encouraged and promoted it deserve well of their country. I am very glad that the West has been roused to a sense of the importance of planting trees, and hope that all parts of the country will soon feel the necessity of preserving them.

Yours very truly,

FRANCIS PARKMAN.

FROM J. T. HEADLEY.

NEWBURG, April 11, 1888.

DEAR SIR—I never believed that Arbor Day was the result of mere reflection—a carefully matured plan—but that it was an inspiration, springing spontaneously from the heart and brain of the author. Human ingenuity could not have devised a scheme so fraught with benefits and yet possessing not a single objectionable feature.

Its material benefits are incalculable. If that man is to be considered a benefactor of his race “who makes two blades of grass to grow where only one grew before,” what shall be said of him who makes a million trees grow where none grew before? Its material benefits alone are incalculable, for it makes the barren land fertile and the desert plain green with beauty.

But these material benefits, great as they are, are small compared with the moral effect on the mind and heart of the people. In the young, especially, it enriches the taste, cultivates the love of beauty, and provides pleasant, healthful impressions that never will be obliterated. The love of trees, I think, has a more elevating effect than even the love of flowers. It is more strong and invigorating.

Besides all these immediate benefits, Arbor Day reaches far beyond the localities where it is observed. The young, gathered in certain sections, eventually become scattered

and have homes of their own. The influence of this day will follow them there, and under the influence of their early cherished impressions trees will be planted, not only around their dwellings, but along the roads and water-courses of the places in which they live, and thus cover the land with beauty and blessing.

All honor, then, to the founder of Arbor Day. The sculptor's art could not erect so noble a monument to his memory as loving hands and hearts are rearing and shall rear to it all over this barren land.

Yours very truly,

J. T. HEADLEY.

FROM THOMAS WENTWORTH HIGGINSON.

CAMBRIDGE, MASS.

DEAR SIR—All lovers of nature may well rejoice in the establishment of Arbor Day and join in doing honor to the founder of an institution so beneficent.

THOMAS WENTWORTH HIGGINSON.

FROM GEORGE WILLIAM CURTIS.

WEST NEW BRIGHTON,

STATEN ISLAND, N. Y., March 21.

DEAR SIR—I am very glad to join in grateful congratulations to the author of the suggestion which has resulted

in so beautiful and serviceable an observance as Arbor Day. Whatever makes a village or town more attractive promotes that local pride and public spirit which are the vital and conservative forces of a great republic; and if the planter of one shade tree is a public benefactor, what shall we say of him who stimulates the planting of whole groves and forests? Truly yours,

GEORGE WILLIAM CURTIS.

FROM CARL SCHURZ.

175 W. 58TH ST., NEW YORK,
March 26, 1888.

DEAR SIR—I gladly join those who honor Mr. Morton for his zeal in promoting the planting of forest trees. The man who does that deserves well of his country.

I am, dear sir, very truly yours,

C. SCHURZ.

FROM HON. B. E. FERNOW.

WASHINGTON, D. C.,
March 23, 1888.

DEAR SIR—The reformer in this world, when he begins his work is called a crank, when he has succeeded in bringing some of the more intelligent people to think and see with him, he is called an enthusiast, and when the results

of his labors begin to show themselves he is called a hero and is worshiped. And well he ought to be! For he has had not only the right idea, but he has had the courage of a hero to stand by his convictions, be it in the wide field of political or national development, be it in the narrower field of economic or communal development.

The man who starts a new idea deserves credit first, the man who puts the idea into practice next, and the man who gains general recognition of its value next. I believe the credit belongs in all these phases to Governor J. Sterling Morton for the idea of Arbor Day, and I gladly pay my tribute to the man who started, put into practice, and promulgated the new idea, which has now become generally recognized as one of the important educational means of changing a race of forest destroyers into a race of forest planters.

As an educational feature, to stimulate interest in tree culture, Arbor Day is now recognized by twenty-eight states; enough to make its observance as a national festival possible and desirable. As a means to produce actual quantitative tree planting—in the number of trees planted on that one day—I believe that Nebraska still stands ahead of all other states, thanks to the fostering care which has been bestowed by the agricultural and horticultural societies and public-spirited men upon keeping the interest in the day unflagging.

And while a comparison of the enormous yearly drain upon our forest resources—equaling probably not less than twice the amount of possible yearly wood-growth on our present forest area—with the amount of present tree planting does not lend strength to the hope that by such tree planting as may be done in one day, an appreciable amount of what has been used during the year is replaced, yet the observance of Arbor Day is aiding in bringing about a realization of the needs of our forestry interests, and will ultimately make the whole country equal to the occasion of a methodical, systematic forestry management.

May the Arbor Days multiply in number each season, and thus not only a praiseworthy sentiment, a spirit of improvement, find active expression, but an important question find its solution.

Truly yours,

B. E. FERNOW.

FROM HON. GEORGE B. LORING.

SALEM, MASS., April 4, 1888.

DEAR SIR—I most cordially extend to Gov. Morton my thanks for the service he has rendered the forestry interests of the United States, by his wise counsels in the management of our wooded tracts; and the zeal he has imparted to our people by instituting Arbor Day. We

have reached a point when we must exercise economy in the use of our forests and taste in adorning our towns. To both these interests Gov. Morton has contributed largely, and for both he is entitled to the gratitude of his country.

Truly yours,

GEO. B. LORING.

FROM ADOLPH LEUE.

CINCINNATI, April 5, 1888.

DEAR SIR—Please accept my sincere thanks for the information contained in your favor of the 26th inst.

In view of the great importance of forests to the prosperity of a country, and in consideration of the fact that our forest area is constantly and rapidly diminished, the necessity of due attention to the forestry question of our country is obvious. The pressing need of the development of a rational system of forestry is not sufficiently felt and understood by the people of this country. Now, in my mind, nothing is better calculated to create an interest in forestry and to nourish such interest where it exists, than the annual observance of Arbor Day.

It is indeed not too much to say that the Nebraska State Board of Agriculture never passed a more important measure than that celebrated Arbor Day resolution of Hon. J. Sterling Morton on January 14, 1872.

The beneficial influence of Arbor Day is not limited to Nebraska, but has extended over nearly the whole country. In no way could the people of the United States better show its gratitude to Mr. Morton than by asking congress to pass a law declaring *Hon. J. Sterling Morton's birthday, the twenty-second day of April of each year, a National Arbor Day*, and by faithfully observing this day by planting of forest trees, or by cultivating trees previously planted.

Hoping that besides an annual Arbor Day we shall soon have Arbor Weeks and Arbor Months, and that these may be as successful as J. Sterling Morton's Arbor Days, I sign,

Very respectfully yours,

ADOLPH LEUE.

FROM HON. GEORGE W. MINIER.

MINIER, ILL., April 7, 1888.

DEAR SIR—Some years since, at the "Forestry Congress" in Washington, D. C., Ex-Gov. Furnas, of your state, introduced Gov. J. Sterling Morton to the congress as the "inventor" of Arbor Day. His hand was heartily grasped by those great-hearted and great-brained men who, without hope of personal reward and at their own cost, were laboring to perpetuate the old and plant new forests. For myself, I felt like Paul at the Three

Taverns (*vide* Acts xxviii. 15), I thanked God and took courage.

All honor to the man who, with noble spirit and fertile brain, conceived the thought, and all honor to the agricultural board which so nobly carried out the plans.

GEO. W. MINIER.

FROM ROBT. W. FURNAS.

BROWNVILLE, NEB., April 9, 1888.

DEAR SIR—In matter of honors, some one once said, or wrote, it matters not who or which, he would "rather be right than to be president." A lover of trees and tree planting might appropriately move an amendment: Substitute for the word "right" the words "author of Arbor Day."

With me it is a matter of pride that Arbor Day originated in Nebraska, and that my warm personal friend and long time intimate associate, J. Sterling Morton, is the author thereof. He, perhaps, thought little when he drafted the resolutions which created Arbor Day that, in his life-time, results would become world-wide and incalculable, as they have.

In fancied dreams I sometimes think if the flora and sylvia work of the here-life could be translated, accompanied by characteristic Divine revision and improve-

ments, what possible greater reward could be conceived than enjoyment of an eternal æolian minstrelsy, which would, in the very nature of things, pervade the orchards and groves in the wonderland of the great hereafter.

It is gratifying to witness preparations made to plant trees in Nebraska on Arbor Day, 1888. Prof. Lane, state superintendent of public instruction, it will be seen by the circulation of his thousands of circulars, takes the matter in hand "with a will."

Yours truly,

ROBT. W. FURNAS.

FROM GOVERNOR THAYER, OF NEBRASKA.

LINCOLN, April 14, 1888.

DEAR SIR—Your favor acquainting me with your purpose to issue an Arbor Day edition of the *Press*, containing, among other matter, tributes to Hon. J. Sterling Morton, as the author of Arbor Day, was duly received.

Replying thereto I take pleasure in saying that I cordially endorse the purpose you have in view. To Mr. Morton belongs the credit and the honor of having originated and inaugurated Arbor Day in Nebraska. As a result of his wise forecast, Nebraska set the example of planting trees; an example which has not only pervaded

many of the older states, but has even reached into foreign lands.

The planting of trees exerts a most wholesome influence, and will in the future confer incalculable blessings upon our race. I gladly join in this public tribute of regard to Mr. Morton. His name will ever be associated with Arbor Day.

Very truly yours,

JOHN M. THAYER.

FROM GOVERNOR MARTIN, OF KANSAS.

TOPEKA, KANSAS, April 5th.

MR. H. L. WOOD: DEAR SIR— * * * I believe it is generally conceded that the Hon. J. Sterling Morton, of your state, was the original suggester or inventor of Arbor Day, and I think it is equally true that the suggestions made by him received a prompt and hearty second in this state.

The designation of one day to be devoted to tree planting has, I believe, been attended with the best results in all the prairie states. It has certainly called the attention of the people generally to the benefits that followed the planting of trees, and thus popularized the work. I have no doubt that hundreds of thousands of trees, planted in Kansas during the past eight or ten years, would never

have been planted if an Arbor Day had never been designated. Mr. Morton's thought has brought forth good fruit, and has been of vast pecuniary value to Kansas and Nebraska, and to all the states of the West.

Yours very respectfully,
JNO. A. MARTIN.

FROM GOVERNOR LARRABEE, OF IOWA.

Plant trees and care for them. Like friends they will always be to you objects of interest and attachment. They will repay you for many years to come in fruit, nuts, and flowers; and will afford protection for man, beast, and bird against the piercing rays of old Sol in summer and the fierce blasts of old Boreas in winter. Plant trees.

FROM GOVERNOR ADAMS, OF COLORADO.

DENVER, April 16, 1888.

DEAR SIR—While to-day we all do honor to those who "invented" Arbor Day, it is a sentiment of gratitude that will grow fuller and stronger as the years pass and the good results of Arbor Day work are seen in reclaimed deserts, in fruitful orchards, in refreshing springs; wherever barrenness has given way to verdure, wherever the desolation of the prairie has been conquered by the planting of

forests, there will you find the ever-living monuments of those who had the wisdom and courage to plant trees upon the western plains.

Truly yours,

ALVA ADAMS.

FROM GOVERNOR BUCKNER, OF KENTUCKY.

FRANKFORT, March 31, 1888.

MR. H. L. WOOD, NEBRASKA "PRESS": DEAR SIR—
"Blessed is the man who invented sleep," said the immortal Sancho, and not less honored should be the name of the patriot who "invented" Arbor Day. He has given an impulse to the thoughts, not only of those who love nature for nature's sake, but of those who earnestly wish to advance, through the ceremonies of Arbor Day, the material interests of the country.

It is to be hoped that the impulse thus started by the Hon. J. Sterling Morton may continue until it results in the adoption by the American people of the custom prevailing amongst the countrymen of Sancho, to plant by the wayside the seed of the fruit that refreshes them in their journey.

Respectfully,

A. B. BUCKNER.

FROM GOVERNOR M'GILL, OF MINNESOTA.

ST. PAUL, March 31, 1888.

H. L. WOOD, ESQ.: DEAR SIR—Minnesota has been following for some years the lead of Nebraska in appointing an Arbor Day, and it has now become a feature in the state. We see the advantages of the custom, and expect to follow it for years to come. To Hon. J. Sterling Morton, of your state, is due the conception of the idea. He has been a public benefactor, and his name should be honored throughout the land. It is to such men that the people should go bearing tribute. I wish to congratulate your state that you have been so fortunate as to have such a man amongst you, and I trust his years may be full of honor to the end of his life.

I am, very truly yours,

N. R. MCGILL.

FROM GOVERNOR SAWYER, OF NEW HAMPSHIRE.

CONCORD, April 5th.

H. L. WOOD: DEAR SIR—Having just issued the gubernatorial proclamation for Arbor Day in New Hampshire, it gives me pleasure to acknowledge our indebtedness to Nebraska as being the first state to establish by legislative enactment the custom of setting apart a day in each year for the planting of trees, which, in common with other states, we have adopted.

The "inventor" of Arbor Day may justly be classed as a public benefactor. Its adoption has added to the interest taken in the science of forestry.

Yours very truly,

C. H. SAWYER.

FROM HON. J. B. GRINNELL.

NORMAL, ILL., April 13, 1888.

MY DEAR SIR—From my home at Grinnell, Iowa, your complimentary invitation was forwarded here, where I am making a family visit.

I heartily approve of your purpose to make the most of Arbor Day, and set on an honored pedestal the name of my old friend, Hon. J. Sterling Morton.

In this literary city of Bloomington, of which Normal is a suburb, there lived the lamented Jesse W. Fell, an arboriculturist and savant of eminence thirty years ago. A million of birds skip on the fruit and ornamental boughs which adorn this country, and for him I seem to hear the plaintive refrain to his memory on the opening of the buds, to lend variety to luxuriant evergreen sentinels waving in grace on the prairie expanse.

I know nothing to so effectually drive away discontent and the demon of unrest as the tree-embowered rural home. Let, then, Nebraska and Iowa plant and cherish

the trees in generous rivalry. Gentle rains shall fall in reward from heaven, before as brass. The brute shall articulate gratitude to his master for shelter and shade, and our children, for the trees we left in arbor, orchard, and field, will find incentives to cherish the paternal legacy, speaking as by the æolian harp long after they who planted sleep in sepulture.

My haste only permits a wish that you make my regards to Mr. Morton, and that the companions of the "Beecher Elm" and "Lincoln Maple" may multiply a thousand-fold, waving fraternal salutations of our Iowa and Nebraska states, in full accord for homes of beauty, temperance, and virtue, and a country heaven shall look down to see.

J. B. GRINNELL.

FROM HON. H. G. JOLY, OF QUEBEC.

QUEBEC, April 2, 1888.

DEAR SIR—I thank you for the opportunity you afford me of showing my respect for the Hon. J. Sterling Morton, the originator of Arbor Day.

Many people, often among the most intelligent, when they first hear of Arbor Day look upon it as a kind of sentimental feast quite out of date in our matter-of-fact generation, but upon a closer inspection they soon discover its practical value.

The celebration of Arbor Day, in which young children are called to take an active part, teaches them to love the trees they plant, and to treasure those that a kind Providence has sown and grown for them. At the same time, it reminds the children's parents that the time has come for them to preserve the remnants of the old forest, or, if too late for that, to make up for their wasteful extravagance by planting a new one.

On your western prairies Arbor Day calls together those who, while grateful for the abundant crops yielded by your fertile soil, still sadly miss the forests of their old eastern homes. It encourages them to do for themselves what a wise Providence has left for them to do, to create new forests which will not only yield fuel and valuable timber, but will even modify the climate and make it still more suitable for all agricultural operations. And, in planting these young trees, which so many will not live to see in their prime, Arbor Day teaches both young and old that it is man's duty and privilege to work, not only for himself but for those who shall come after him.

May the Hon. J. Sterling Morton be spared to enjoy many more such celebrations as this, and to see each successive Arbor Day more successful than the last.

Believe me, dear sir,

Yours truly,

H. G. JOLY.

FROM J. B. PEASLEE.

CINCINNATI, April 9, 1888.

DEAR SIR—It is a source of great pleasure to me as it must be to every lover of trees and of forest culture to know that you, through your influential paper, the *Nebraska Press*, are about to do just and merited honors to the distinguished originator of Arbor Day, the Hon. J. Sterling Morton, of your city. No man now living has done more to beautify and enrich his state and country than he. Millions upon millions of green and living monuments attest his forethought and his worth; and as these trees grow and expand in beauty, so will the love of this great benefactor increase in the hearts of our people.

It is singularly fortunate that Governor Morton's birthday comes at just that time of the year in your and many of the other states, when most suitable for tree planting, so that "Morton Day," and Arbor Day can be united in one, and the 22d of April be known throughout the country as Morton-Arbor Day.

Years ago, while superintendent of the Cincinnati public schools, I inaugurated the celebration of the birthdays of authors; and in 1882, the year Ohio followed your state in instituting Arbor Day, I carried the celebration to Eden Park, where the children planted and dedicated with

appropriate literary, musical, and other exercises, trees in honor and memory of distinguished and worthy authors, statesmen, scientists, and so on. This beautiful custom has been adopted in at least nineteen states of the Union, in the dominion of Canada, and has crossed the ocean into England. In this connection let me request superintendents and teachers to see to it that every school has its "Morton tree," around which, annually, on his natal day, appropriate celebration exercises shall be held; and let me suggest that it would be a wise and gracious act for each state, where climatic conditions are favorable, to appoint the 22d of April as Arbor Day, in honor of its originator.

Heartily thanking you for giving me this opportunity to participate with you in honoring your distinguished fellow citizen,

I remain, yours truly,

JOHN B. PEASLEE.

FROM N. H. EGLESTON.

WASHINGTON, D. C., April 16, 1888.

H. L. WOOD, ESQ.: DEAR SIR—It is eminently proper, and according to "the eternal fitness of things," that the day designated for Arbor Day in Nebraska this year should be that of the anniversary of the birth of the

Hon. J. Sterling Morton, to whom not only is Nebraska, but the whole country, indebted for the origination of a day which promises to become a national holiday of the highest and most useful character, and to perpetuate the memory of Mr. Morton as no monument of marble or brass could do. If our country was not so vast in extent, and our climate in consequence so varied, if Florida and Nebraska, if Maine and California were enough alike in climate to allow of tree planting at the same time, and that time could be the 22d of April, surely we should all adopt that day. But whatever day may be designated in any state as most fit for simultaneous and united tree planting, we cannot fail to remember the man whose happy thought and full appreciation of the value of trees to man, led to the suggestion of this tree planting festival. Now that our schools have become so largely enlisted in the observance of Arbor Day, it has become one of our best educational appliances, and I hope that on this account the next generation will be as eminently one of tree lovers and tree protectors as the present has been of tree destroyers.

Arbor Day is full of good influences. May you have a happy celebration of it in Nebraska.

Yours for the trees,

N. H. EGLESTON.

FROM WARREN HIGLEY.

NEW YORK, April 19, 1888.

MY DEAR SIR—Your esteemed favor of nearly one month ago came in my absence, and has been neglected until I fear it is too late for word from me to reach you.

It gives me great pleasure to add my testimony to the value of a life that has been instrumental in conferring so vast a blessing on mankind as that of the Hon. J. Sterling Morton of your state.

The institution of Arbor Day has given an intense interest throughout the land to the value of trees and the necessity for forests. It has fired the youth with a love for nature and for the study of her laws. It has stimulated the æsthetic sense of the people, taught the lesson that a landscape without the everchanging beauty of tree and grove is but a desert; and that without a fair proportion of forest growth, a country, however fertile at first, is sure to become a barren waste—a perpetual rebuke to the ignorance and greed of ungrateful man.

Arbor Day, publicly instituted and established by Gov. Morton, has spread gloriously among Nebraska's sister states, until a large proportion of them has engrafted it in their laws; and with the Arbor Day teachings our country is bound to increase the efforts toward preserving and conserving her forest domain.

All honor to Gov. Morton, and in his life-time. He has done a work that entitles him to a monument as high as the towering pine, sturdy as the oak, graceful as the stately elm, and as enduring as mountains of granite. When he established Arbor Day he planted the seed that has grown and will continue to grow in the hearts of his countrymen, and bear the fruits of noble deeds that are a continual blessing to the whole country.

May he live long to enjoy the honor of this great work, while he sees it grow and spread to the delight and benefit of all.

Very sincerely yours,

WARREN HIGLEY.

FROM SECRETARY BAYARD.

WASHINGTON, D. C., March 31.

H. L. WOOD, ESQ.: DEAR SIR—Responding to your suggestion, I am happy to record my vote in favor of public thanks to a living benefactor, without waiting until “storied urn or animated bust” are raised to him who is beyond the reach of such gratification.

Present laws in Kansas may make it dangerous for a man to raise a “vine” there, but a “fig tree,” under whose shade he may recline, is even there permissible. In Nebraska, a man may sit under both his vine and fig tree, and “none shall make him afraid.”

I count it my good fortune to have long known J. Sterling Morton; and appreciate his many delightful qualities of head and heart. It was the wisdom of a good heart and far-seeing sagacity that induced him, sixteen years ago, to lead the State Board of Agriculture to "set apart and consecrate" a day for tree planting. I do not say that Mr. Morton "builded wiser than he knew," but he built wisely, and the expansion of his thought has wonderfully blessed his country, and deserves the hearty thanks and recognition of his countrymen in all sections.

The wisdom and pertinency of Jonathan Swift's saying may now well be recalled: "And he gave for his opinion, that whoever could make two ears of corn or two blades of grass to grow on a spot of ground where only one grew before, would deserve better of mankind, and do more essential service to his country, than the whole race of politicians put together."

If this were true of two ears of corn or blades of grass, how much more of a tree.

"The trees went forth on a time to anoint a king over them, and they said unto the olive tree: 'Reign thou over us.'"

May such be the ruler in these United States.

I am, very truly yours,

T. F. BAYARD.

FROM PROF. A. L. PERRY.

WILLIAMS COLLEGE,
WILLIAMSTOWN, MASS., April 5, 1888.

My first personal acquaintance with Mr. Morton was made in 1875, although more than twenty years before that we were both members of the same affiliated college society, he in the University of Michigan, and I in Williams College, and I remember very well with what pleasure and laughter the letters from the Michigan branch, of which he was secretary, were read here. In 1875 he was president of the state agricultural society of Nebraska, in which capacity he invited me to deliver the annual address at Omaha. It was a long journey to take for the sake of making an hour's talk; but I never found occasion to regret either the journey or the talk, because the latter, "Foes of the Farmers," was soon after published by the society that procured it in two successive editions and widely scattered, and was also printed by the *Chicago Times* and other newspapers, so that something like a quarter of a million copies were circulated.

The main reason, however, why I have never regretted that journey to Omaha is, that I thus was enabled to make the personal acquaintance of Mr. Morton himself and his most estimable lady, since departed, to both of whom alike, as I understand it, Nebraska and the whole

country are indebted for the useful and beautiful annual of Arbor Day.

The late Senator Hitchcock, who was a graduate of this college and a pupil of mine, did me the honor to listen attentively to that address, and in connection with the Mortons showed me many polite attentions besides, as did also Mr. Howard Kennedy and his excellent wife, at whose house I was hospitably lodged.

Since then I have been repeatedly at Nebraska City, and have found in Mr. Morton, in his own home at Arbor Lodge, not only an esteemed and established friend, but also a man in whose political intelligence and deep-seated fidelity to the rights of the masses of the people I feel the utmost confidence. He owes much in character and courtesy and keenness to his venerable mother, still living; and I cannot conclude this note, written at the suggestion of one of his neighbors, without expressing the friendly hope that his sons, some of whom are at present in positions of great responsibility, may follow in the moral footsteps of a worthy and lovable father.

ARTHUR LATHAM PERRY.

FROM WIRT DEXTER.

CHICAGO, April 9, 1888.

DEAR SIR—I thank you for calling my attention to your proposed Arbor Day edition of the *Press*. When I

first visited Nebraska, on the invitation of my old school-mate, J. Sterling Morton, I thought it had every element of beauty but trees. This great want, as I have repeated my visits year by year, I have seen supplied. In my shooting trips, as I have sometimes rested in the shade of Arbor Day trees, I can assure you that it has been none the less grateful to me because I knew that the trees under which I reposed were the product of a happy thought by a dear friend.

If it be true, as has been said, that the man was a public benefactor who made two blades of grass grow where only one grew before, what may not be said of the benefactions of the man who has made trees grow where *none* grew before?

Yours truly,

WIRT DEXTER.

FROM J. M. WOOLWORTH.

OMAHA, NEB., April 9, 1888.

DEAR SIR—You have laid me under obligations by asking me to join my fellow citizens in bearing testimony to Mr. Morton's services to the cause of forestry. Those of us whose memories go back to the days when the foundations of social and civil order were being laid in Nebraska will never forget our sense of loneliness as we looked out upon the treeless prairies. Ever since those

days Mr. Morton has given his efforts to redeem the dreariness of the landscape.

It was a characteristic suggestion of his that one day should be devoted by all the people to this service, and be taken out of the calendar of work days and made a holiday ; and its labor should not be a toil but recreation.

Arbor Day is beneficent ; for its beauty and usefulness our friend will be held in "everlasting remembrance."

Yours truly,

J. M. WOOLWORTH.

FROM A. J. SAWYER.

Highest tribute is ever given to scientific discoverers, for to them we are indebted for the glimpses we have of the mysteries of nature, for the knowledge of the laws and principles which govern that occult realm, and for the exhibition of the power of nature's forces ; but still greater homage should be given to those who are able to apply these principles to practical account in supplying the wants of man, and who are able to harness these subtle forces to the chariots of civilization or to economize and utilize them for the benefit of their fellow men.

Compare the kite and key of Benjamin Franklin, distilling the electric spark, with the telegraph of Morse and the Atlantic cable of Field ; the falling apple of Isaac

Newton with the myriad applications of the force of gravity in mechanics, or Wenzel's ideas of chemical combinations with the compounds made so useful in the industrial arts through the practical labors of Michael Faraday.

What these almoners of science are to the health, comfort, and luxury of home, and to the growth and munificence of commerce, the founder of Arbor Day is to the wealth and enjoyment of the future.

Prior to 1872 no system of forestry had been attempted in the United States. The spasmodic efforts of tree planting upon a small scale, with very rare exceptions, were attended with the most unsatisfactory results.

Forests were cut away without system and without thought of future conditions or wants, until it was self-evident that unless some judicious and comprehensive forest policy was adopted, this continent, once bristling with its primeval forests, would be permanently deprived of an element which constitutes a most important part in the economy of nature.

Forestry, no less than science, is a development of civilization. Colbert was instrumental in preventing the useless wastes of the forests of the old world, but the honor of bequeathing to future generations an invaluable legacy by the perpetuation of forests was reserved for a philanthropist of a more advanced age.

There is no state in the Union but needs such a legacy, and when that which is now observed in twenty-eight states becomes a national holiday, then will each citizen have left to him and to his heirs forever, under a seal greater than that of Cæsar's, "private arbors and new-planted orchards."

If a John Howard, ameliorating the evils of convict life and alleviating the sufferings of prisoners, can be called the "world's philanthropist," surely he who originates measures which tend directly to the improvement and fertility of the land and the wealth and comfort of the inhabitants, adding as many dollars to the world's exchequer as the mines of uncoined ore produce, and more rays to the brightness of the world's civilization than the electric spark has generated, is not least among his fellow men.

A. J. SAWYER.

FROM IRVING J. MANATT.

LINCOLN, April 17, 1888.

MY DEAR SIR—One whose life has been largely spent in the presence of grand old forests can but set a high value on the institution of Arbor Day. Its purpose appeals to the finer sentiments and to hard common sense alike; and it is but natural that the idea of it should

have originated in a mind at once poetic and practical. I believe that the author of Arbor Day is to hold a permanent place in popular regard alongside the author of the homestead law.

This commonwealth of its origin should not only celebrate but use the day, until everywhere within her borders "the wilderness and the solitary place shall be glad for it, and the desert shall blossom as the rose; * * and the parched ground shall become a pool, and the thirsty land springs of water."

Last year the university had the privilege of listening to the chaste and classic eloquence of Mr. Morton himself; this year we observe the day by laying the corner-stone of the Grant Memorial Hall, a structure consecrated in a special sense to the sentiment and the duty of patriotism. Whether by planting trees or by planting institutions, we propose always to honor the day which Nebraska has given to the nation, and which the nation is so warmly taking to her heart.

I desire to join with all my heart in the congratulations which the 22d of April must always bring to the distinguished citizen to whom Nebraska and the nation are alike indebted for Arbor Day.

Faithfully yours,

IRVING J. MANATT.

FROM A. J. POPPLETON.

EL PASO, TEXAS, April 19, 1888.

DEAR SIR—Yours was received in the City of Mexico. A letter cannot reach you in time. Arbor Day is recognized and celebrated in Mexico. Mr. Morton, its author, is a benefactor of other states and countries as well as his own. In Nebraska, "Plant trees" should be the eleventh commandment.

A. J. POPPLETON.

FROM JOHN C. FREMONT.

LOS ANGELES, CAL., April 20.

H. L. WOOD, ESQ.: DEAR SIR—I received letter concerning your intention to honor Mr. Morton by a special Arbor Day edition of the *Press*, and I sincerely regret that my reply will not reach you in time to have a place among the tributes paid to his noble work.

It strikes us always with surprise when suddenly some great act makes us see how much good one man can do, and Mr. Morton's is exceptionally of this kind. I am naturally and by the education of experience and travel a lover of forests. Their still and solemn beauty, the sense of repose and shelter which they give within quiet depths, while storms may rage through their summits, have been a real joy to me.

But, in a larger view, the protection which they afford to great regions from stormy weather, their gathering and holding in storage supplies of water for rivers and for the needs of agriculture, have made me see with constant regret their wasteful destruction throughout the country.

Some years of travel over the north-western plains, many years ago, made me familiar with their widely different character and aspects in the different seasons. I have enjoyed in summer their delightful weather, their green seas of grass, and the grateful breeze, like that of ocean, which belongs to them; and in winter I have looked out over their treeless wastes with many a foreboding of disaster. It was upon them that I learned the value of forest growth. It was that absence of timber that made their dangerous character in winter, which gave constant anxiety and required caution in travelers, and which daily impressed upon my mind the value of forests, and gave to their beauty and grandeur that one great feature of surpassing value.

This experience of travel which I have had enables me to appreciate fully the great value to the country of the work initiated and established by Mr. Morton. Working in harmony with the efforts of nature, his work is imperishable, and is of the kind which we should suppose a good government would aid and foster and encourage. For myself, I am glad to have the opportunity you have

given me to enroll myself among the friends and well-wishers of Mr. Morton, and to congratulate him upon the success of his unselfish and broadly useful work.

Although only in a local way, we too have been working here in harmony with nature by celebrating the annual Festival of Flowers.

Yours truly,

JOHN C. FREMONT.

THE TREE PLANTER.

Tribute of fruits be his, and glossy wreaths

From roadside trees, and his the people's love,

When east and west the wind of summer breathes

Through orchard, shaded path, and sighing grove.

EDMUND C. STEDMAN.

HON. J. STERLING MORTON,
the originator of Arbor Day.

New York, April, 1888.

FOR ARBOR DAY.

Let dead names be eternized by dead stone,

Whose substance time cannot increase nor mar;

Let living names by living shafts be known,

That feel the influence of sun and star.

Plant thou a tree, whose griefless leaves shall sing

Thy deed and thee, each fresh unfolding spring.

EDITH M. THOMAS.

New York, April 14.

SPECIMEN GUBERNATORIAL ARBOR DAY
PROCLAMATIONS.

NEBRASKA.

TO THE PEOPLE OF NEBRASKA:

Spring-time is at hand—the time to plant trees. Therefore, in accordance with an appropriate custom, now well established and recognized by law, I hereby designate the 23d day of April, 1888, as

ARBOR DAY,

and I do earnestly request the people throughout this state to plant trees, *plant trees*, PLANT TREES; and the present and future generations will rise up and call you blessed.

If, unfortunately, the weather should be so stormy as to prevent the work on that day, please do not fail to observe the next fair day.

IN WITNESS WHEREOF, I have hereunto set my hand and caused to be affixed the great

[SEAL.] seal of the state of Nebraska.

Done at Lincoln, this 21st day of March, A.D.
1888.

JOHN M. THAYER.

By the Governor:

G. L. LAWS,

Sec'y of State.

KANSAS.

STATE OF KANSAS,
EXECUTIVE DEPARTMENT,
TOPEKA, February 9, 1888.

The designation, by the executive, of a day to be devoted to the planting of trees has been approved by public sentiment, and is justified by the experience and results of former years:

Therefore, I, John A. Martin, governor of Kansas, do hereby designate and appoint Wednesday, April 4th, as Arbor Day, and do request the people of Kansas to devote that day to the planting of trees, forest, fruit, shade, or ornamental, around their homes, in their fields, along the highways, and in the grounds surrounding schools, churches, and other public buildings.

The officers of the several school districts of Kansas, and the teachers employed in the public schools, are especially urged to give attention to the planting of trees in school grounds and parks.

IN TESTIMONY WHEREOF, I have hereunto
subscribed my name and caused to be
[SEAL.] affixed the great seal of the state.

Done at Topeka this 9th day of February,
A.D. 1888, and of the state the twenty-
eighth.

JOHN A. MARTIN.

By the Governor:

E. B. ALLEN,
Sec'y of State.

DAKOTA.

TERRITORY OF DAKOTA,

EXECUTIVE DEPARTMENT,

BISMARCK, March 20, 1888.

In conformity with custom and the sentiment of our people, I, Louis K. Church, governor of Dakota, do hereby designate Wednesday, April 25th, as Arbor Day for that portion of Dakota lying south of the 7th standard parallel of latitude, and Thursday, May 5th, as Arbor Day for that portion of Dakota lying north of such parallel, and I do declare the same a legal holiday, and request that the people devote the day as designated to the planting of trees, shrubs, and vines in and about public and private grounds and ways, and I especially urge appropriate observances in our public schools, and that public officials and citizens generally aid in making the day one that will confer a blessing to the future as well as a benefit to the present; and I would call attention to the wise laws of Dakota upon this important subject, which are as follows:

“On all public highways of not less than sixty-six feet in width, the owners, occupants, or claimants of adjoining lands may use and occupy one rod in width of such highway adjoining such lands for the purpose of cultivating the growth of timber and trees thereon; Provided, That

the same be kept continuously in good order and under full timber and tree cultivation.

“Any person cultivating a hedge upon his land adjoining a public highway and desiring to fence the same, may place such fence seven feet over and upon such highway; Provided, That it do not obstruct the public travel.

“Every person planting one acre or more of prairie land within five years after the passage of this act (March 13, 1885) with any kind of forest trees except black locust and cottonwood, and successfully growing and cultivating for three years, shall be entitled to receive for ten years thereafter an annual bounty of two dollars for each acre so planted and cultivated, to be paid out of the territorial treasury; but such bounty shall not be paid any longer than such grove of trees is maintained and kept in growing condition.

“Any person wishing to secure the benefit of this act shall, within three years after planting such grove of trees, and annually thereafter, file with the county auditor or clerk of the county in which the same is located, a correct plat of land, describing the section or fraction thereof on which such grove has been planted or cultivated, and shall make due proof of such planting and cultivation, as well as of the title to the land, by oath of the owner and the affidavit of two householders residing in the vicinity, setting forth the facts in relation to the growth and culti-

vation of the grove of trees for which such bounty is demanded. The several county auditors or clerks shall, on or before the first Monday of August of each year, forward to the territorial auditor a certified list of all the lands and tree planting reported and verified to them in compliance with this act, with the name and post-office address of the respective owners thereof; Provided, This act shall not apply to any railroad company for planting of trees within two hundred feet of its track for the purpose of making a snow fence, nor to any trees planted upon land held, entered, and acquired under the timber culture act of the United States.

“If the territorial auditor shall find that the provisions of this act have been duly complied with, he shall issue to the several applicants entitled thereto his warrant upon the territorial treasurer for the bounty so earned.”

IN WITNESS WHEREOF, I have hereunto
subscribed my name and caused the great
[SEAL.] seal of Dakota to be affixed this 20th of
March, 1888.

LOUIS K. CHURCH,
Governor.

By the Governor:

M. L. MCCORMACK,
Secretary.

ILLINOIS.

STATE OF ILLINOIS,
EXECUTIVE DEPARTMENT,
SPRINGFIELD, March 13, 1888.

“AN ACT to Encourage the Planting of Trees.

“SEC. 1. *Be it Enacted by the People of the State of Illinois, represented in the General Assembly:* That the governor shall annually, in the spring, designate, by official proclamation, a day to be designated as Arbor Day, to be observed throughout the state as a day for planting trees, shrubs, and vines about the homes and along highways, and about public grounds within this state, thus contributing to the wealth, comfort, and attractions of our state.”

To give effect to and carry into execution the foregoing act, Friday, the thirteenth day of April, 1888, is hereby designated as Arbor Day.

I earnestly commend to the people of the state the observance of said day. It is believed great good will result from an earnest effort by the public to inaugurate and perpetuate a day for the special purpose of planting trees, shrubs, and vines. It would greatly add to the beauty of our state, could every home, school-house, church, highway, and public grounds be ornamented by trees, arbors, shrubs, and vines, and great benefit would

result from planting forest trees, which in time would immensely increase the value of our lands. Should local committees agree to co-operate in this respect, a great deal would be accomplished; but whether communities shall co-operate, or individuals alone undertake to adorn and beautify the state, there can be no doubt that if the day is properly inaugurated and habitually observed, great public and private good will result from its observance.

IN WITNESS WHEREOF, I hereto set my
[SEAL.] hand and cause the great seal of the State
to be affixed.

Done at Springfield, the day and year first
above written.

RICHARD J. OGLESBY.

By the Governor:

HENRY D. DEMENT,
Secretary of State.

COLORADO.

In compliance with the desires from public schools, and with the wishes of our people generally, I hereby designate Friday, the sixth day of May, as Arbor Day. I trust that our citizens will observe the day by beautifying their homes, the streets, the highways, and the public places.

To the teachers in our public schools, I would suggest

that on this day they give such instruction as will bring to the mind of every pupil the value and beauty of forestry, and to devote a portion of the day to practical experience in planting trees in school yards and other places.

There is an Arabian proverb that, with the planting of a tree, a blessing comes to him who drops the seed. This is a sentiment that should find expression in the life and acts of every citizen of our state. We are to-day enjoying the grateful shade, the scenes of beauty, and the fragrant fruitage of those trees whose planting was the thoughtful care of those who first came to this western land. In this arid country, where the fields bloom only by the aid of artificial irrigation, it is not alone the sentiment of beauty, but of utility and profit, that should inspire a general observance of Arbor Day.

Climate, health, comfort, the products of our soil—everything that makes Colorado attractive and desirable—depend, to a certain extent, upon the influence of forest culture. Let every child, every citizen, plant each year a tree, and a few years would change the aspect of our country; there would remain for those who come after us not only living and beautiful memorials of our labor, but they would cover with verdure the domain where desolation now reigns, and convert the barren plains into fruitful fields.

The tree, vine, and flower are the ornaments with which the Creator adorns the home of man, and he who cares for these children of Nature obeys the mandates of Him who placed us here, contributes to the wealth of his country, and augments the happiness of posterity.

ALVA ADAMS,
Governor.

ARBOR DAY IN SCHOOLS.

At Grand Rapids, Michigan, January 26, 1888, before the State Forestry Convention, the following exercises were had. Seventy-five pupils from one of the schools, each representing a different kind of a tree, were arranged together in the room, and constituted "A Convention of Michigan Trees."

Norway Pine (Louie), rising, said: Fellow Trees of Michigan—In order to organize this meeting, I move the election of White Oak as chairman. Seconded. All favoring this motion please say Aye. Vote apparently unanimous. Those who are opposed say No. The ayes have it; the White Oak will take the chair.

White Oak (Julius), taking the chair, said: Fellow Trees, the object of this meeting is to consider whatever

may be to our best interests in the forests of Michigan. It is a subject of great importance to the state, and to all of us, and we hope to hear from every one present, and gain much valuable information from each other. We have gathered from all parts of the state for this conference, and that we may have a permanent record of the proceedings for ourselves and for the press, will some one name a recording secretary.

Beech (Harriet): I nominate Chestnut (Lily). Seconded.

White Oak: All who favor the nomination say Aye. Many ayes. Those opposed will say No. The ayes have it. Chestnut is elected secretary. (She takes her place.)

White Oak: Our musician, Miss Pine (Bessie), has kindly arranged the music for us. She sings only when the spirits move her, and we may know when that is by the peculiar swaying of her head. At the swaying we will suspend business and listen. She moves now—we'll hear "The Echoes from the Forest." (Bessie sings.)

White Oak: We are now ready for discussion (several trees rising at once). Tulip Tree has the floor.

Tulip Tree (Herman): Fellow Trees, I am glad of this opportunity to plead my qualifications as an ornamental tree. I grow to a great size and height, and have shining, queer-shaped leaves, and large, tulip-shaped blos-

soms, which remind you of the sunny South, where live my sisters, the Magnolias.

Burr Oak (Joseph): I would like to ask Tulip Tree of what use he is? Michigan people have a right to demand of us usefulness as well as beauty.

Tulip Tree: I am not only valuable as an ornamental shade tree, but I also furnish excellent timber for carriage bottoms, furniture, and finishing houses. Years ago my forefathers were numerous south of the Grande River valley, and supplied food for laths and shingles, and lumber in the place of the white pine. Our family is a small one, represented in Michigan by a single species.

White Oak: We shall be glad to hear from any members of the Oak family living in Michigan. (Sixteen members rise.) This is certainly a large family. I recognize Chestnut as entitled to the floor. What claims have you to rank in your family?

Chestnut (Lily): All botanists of the present day agree that the beech, the ironwood, the blue beech, the hazels, and the chestnuts are first cousins to the oak. I live in four counties in the south-eastern part of the state, and am well known for valuable timber, and for a good crop of edible nuts.

Beech: Upon my smooth, gray bark many a heart history has been carved. The poet Campbell tells it so beautifully:

"Thrice twenty summers have I stood
Since youthful lovers in my shade
Their vows of truth and rapture paid,
And, on my trunk's surviving frame,
Carved many a long forgotten name."

And here is another beautiful thing from Whittier:
"I have always admired the taste of the Indians around
Sebago lake, who, when their chief died, dug round the
beech tree, swaying it down, and placed his body in the
rent, and then let the noble tree fall back into its original
place, a green and beautiful monument for a son of the
forest." I am one of the commonest and well known
trees of Michigan.

Burr Oak: Out of about 300 Oaks, ten of us live in
this state. Brother White Oak is by far the most com-
mon and well known. He is the senior member of our
family and has attained a very great age. He never
thrives in perfection except in a good soil and a temperate
climate. The Michigan people are proud that so many of
our family live with them.

Tulip Tree: White Oak is certainly loyal to his
family, but I should like to hear of his uses.

Burr Oak: Every particle of him is useful, even to his
ashes. His bark is used for tanning leather; his wood is
hard, compact, heavy, tough, and durable; good for heavy
wagons, plows, railroad ties, fence posts, ship timber,
furniture, and finishing the interior of houses.

Swamp White Oak (Leona): As much of my timber is so nearly like that of White Oak, and often passes for it, I will say, as a tree, "I am beautiful in every stage of my growth; at first, light, slender, delicate, and waving; at last, broad, massive, and grand, but always graceful."

Chestnut Oak (James): Emerson says of White Oak: "As an ornament to the landscape, or as a single object, no other tree is to be compared with it, in every period of its growth, for picturesqueness, majesty, and inexhaustible variety of beauty. When standing alone it throws out its mighty arms with an air and force of grandeur which have made it everywhere to be considered the fittest emblem of strength and power of resistance. Commonly the oak braves the storm to the last, without yielding, better than any other tree. The limbs go out at a great angle and stretch horizontally to a vast distance."

Laurel Oak (John): The famous A. J. Downing said: "There are no grander or more superb trees than our American oaks. We are fully disposed to concede it the first rank among the denizens of the forest. As an ornamental object we consider the oak the most varied in expression, the most beautiful, grand, majestic and picturesque of all deciduous trees."

Black Jack Oak (Herbert): Poetry, history, mythology, and romance abound in references to the oak. I

should like to hear from our fellow trees some common quotations in reference to the oak.

White Ash (Myrtle): "The unwedgeable and gnarled oak."

Black Ash (Ella): "The old oaken bucket."

Sugar Maple (Louise): "Jove's own tree that holds the woods in awful sovereignty."

Red Maple (Anna): "A goodly oak, whose boughs were massed with age."

Scarlet Oak (Ben): "King of the woods."

Blue Ash (Amy): "Thy guardian oaks, my country, are thy boast."

Silver Maple (Kate): "The monarch oak, the patriarch of trees."

Butternut (Burke): "The oak, for grandeur, strength, and noble size, excels all trees that in the forest grow."

Black Walnut (Frank): "Tall oaks from little acorns grow."

Buttonwood (Harrison):

"Woodman, forbear thy stroke!

Cut not its earth-bound ties;

Oh, spare that aged oak,

Now towering to the skies."

Sassafras (Henry):

"Behold yon oak,

How stern he frowns."

Pepperidge (Walter): "The glory of the woods."

Buckeye (Samuel):

"Proud monarch of the forest!
That once, a sapling bough,
Didst quail far more at evening's breath
Than at the tempest now.
Strange scenes have passed, long ages rolled,
Since first upon thy stem,
Then weak as osier twig, spring set
Her leafy diadem."

Red Oak (Lulu): I begin to feel my pride rising, and hope White Oak will give me a chance to quote a poem written in honor of one of our family.

White Oak bows.

Red Oak:

"A glorious tree is the old gray oak;
He has stood for a thousand years—
Has stood and frowned
On the trees around
Like a king among his peers;
As round their king they stand, so now,
When the flowers their pale leaves fold,
The tall trees around him stand, arrayed
In their robes of purple and gold.
He has stood like a tower,
And dared the winds to battle;
He has heard the hail,
As from plates of mail,
From his own limbs shaken, rattle;

He has tossed them about and shorn the tops,
When the storm has roused his might,
Of the forest trees, as a strong man doth
The heads of his foes in fight."

Scarlet Oak (Otto): The poem which Red Oak quoted reminded me of an old saying of Dr. Holmes. He says: "I wonder if you ever thought of a single mark of supremacy which distinguishes this tree from those around it? The others shirk the work of resisting gravity, the oak defies it. It chooses the horizontal direction for its limbs, so that their whole weight may tell, and then stretches them out fifty or sixty feet, so that the strain may be mighty enough to be worth resisting. You will find that in passing from the extreme downward droop of the branches of the weeping willow to the extreme upward inclination of those of the poplar, they sweep nearly half a circle. At ninety degrees the oak stops short; to slant upward another degree would mark infirmity of purpose; to bend downward, weakness of organization."

Black Oak (Ruby): What the Oak says sounds scientific. I want to tell you something that begins with "once upon a time." Once upon a time the Evil One agreed with a man that he should have the latter's soul at the time when the oak leaves fell; but when he came to look at the oak in the autumn he found it still in leaf, nor

did it part with its old leaves until the new ones began to sprout. In his rage and disappointment he scratched the leaves so vehemently that they have in consequence been jagged ever since.

White Oak: These are certainly good words for the oak family. We will next listen to some music from the litte birds—our very dear friends. (Song by school children.)

White Oak: We shall next hear from the maples, of which there are six in our state. They are cousins to the buckeye, bladdernut, and box-elder, all of which belong to the maple family.

Sugar Maple (Louise): I am a favorite ornamental tree. Poets of all ages have sung about the oak. I am no "Sweet Singer of Michigan," but I am possessed of sweetness. I claim to have made more boys and girls happy than any other tree. I have many changes in dress—wearing in spring the softest shade of every color; in the summer the purest emerald, and in the autumn the most brilliant yellow. My wood is used for furniture, floors, and for furnishing the interior of houses, and after the houses are finished, few can warm them better than I.

Red Maple (Mary): I am often called Soft Maple, a name also applied to one of my sisters. I beautify the country in spring with early red blossoms, and in autumn my leaves are streaked with scarlet.

Silver Maple (Jennie): My sister Red Maple and myself are both called Soft Maple. I make a very rapid growth, and am found by the side of streams. I am often planted as a shade tree, and in the far West many are planted for shelter belts and for timber.

Basswood (Maud): I am a fine shade tree, my home a moist, rich soil. My fragrant flowers furnish a great amount of excellent honey for the bees at a time when most other flowers have disappeared. My timber is soft, light, and tough, and not apt to split, good for cabinet work, boxes, broom handles, etc. My proper name is Linden.

Black Cherry (Ethel): With our beautiful blossoms we need not be envious of the orange groves of California. I am one large snowball of blossoms in the spring. My fruit is much liked by the birds, and my wood is fine, light, durable, and looks much like mahogany. My cousins are the wild plum, crabapple, mountain ash, hawthorn, junberry, spirea, the apple, pear, quince, and the peach, and we all belong to the rose family.

Black Walnut (Frank): I am not ornamental, nor am I a good neighbor, for I sometimes poison other trees that live near me. In spite of my bad qualities, I am liked because I can be converted into cash at any moment. Some of my brothers have sold as high as \$2,000. Those who care for us, care for a fortune. My relative, the

Butternut, is much loved by boys and girls. It was round my brother, at Haverstraw, on the Hudson, that Gen. Wayne mustered his forces at midnight, preparatory to his attack on Stony Point.

Hickory (Ray): There are four brothers of us in Michigan, but I am the least worthy of them all, and am the only one present at this convention. We are cousins of the walnut and butternut, and all belong to the walnut family. If you want a wood that is good for buggies, ax handles, barrel hoops, a wood like iron, call upon my brother Shag-bark. You will have all the nuts you want thrown into the bargain. Once upon a time there was a president of the country who had so many of my qualities that they called him "Old Hickory."

White Oak: We will sing about the "Echo which in the forest dwells." (Song.)

White Oak: We will next hear a few words from the Ashes. (Three rise and stand till all are through.)

White Ash (Myrtle): I am a tall tree, and have often been complimented for my usefulness. I have often been told that I have a graceful top and beautiful pinnate leaves. My wood is heavy, hard, strong, coarse-grained, compact, and of a brown color, and is much used for cabinet ware, farm implements, and house finishing. I thrive on moist, rich soil.

Blue Ash (Amy): I am not often found in Michigan.

I grow slowly, and attain a good size. My wood is valuable for lumber, posts, and sills. I may be distinguished from all other ashes by my square branches of a year's growth.

Black Ash (Ella): I thrive in swamps and along streams, and become a large, useful tree. My wood is used for furniture, barrel hoops, and baskets. When well cared for, I become one of the finest ornamental trees. For this purpose I have never been fully appreciated. The ashes belong to the olive family. We have been called musical, as in this quotation :

“Ye ashes, wild resounding o’er the steep,
Delicious is your music to the soul.”

White Oak : Who will speak next? (A number rise.)
Birch has the floor.

Birch (William): I am a useful factor *in the cause of education*, though not now so commonly found in the school-room as in former years. There are five sisters of us Birches in Michigan. The alders are our cousins. Probably you are best acquainted with the canoe birch, whose white wood you see in spools and shoe-pegs. It gives up its beautiful white dress without any injury to itself. Longfellow has made us a celebrated family in Hiawatha. He says of us :

"Give me of your bark, O, Birch tree!
Of your yellow bark, O, Birch tree!
Growing by the rushing river,
Tall and stately in the valley!
I a light canoe will build me,
That shall float upon the river,
Like a yellow leaf in Autumn,
Like a yellow water lily!
Lay aside your cloak, O, Birch tree!
Lay aside your white skin wrapper;
For the summer time is coming,
And the sun is warm in heaven,
And you need no white skin wrapper."

White Oak: Let us hear from the Elms.

American Elm (Lida): I have been called the Queen of the Forest, and stand without a rival at the head of the list of ornamental deciduous leaved trees. I claim this rank on account of hardiness, rapid growth, and the graceful and majestic beauty of my drooping branches. We are very proud of our Massachusetts relative under whose venerable shade Washington first took command of the Continental Army, July 3, 1775. How the affection of every lover of the country clings around that tree! What care has been taken of it, what marks of esteem have been shown it by the citizens of Cambridge, may be judged by those who have seen it standing, as it does, in the center of a great public thoroughfare, its trunk protected by an iron fence from injury by passing vehicles, which for

more than a century have turned aside in deference to this monarch of the revolution.

Red Elm (Claude): I am well known for my durable red wood and mucilaginous bark, and am often called "Slippery Elm." My sister, Rock Elm, is a fine tree with corky branches, and the wood is valuable for farm implements.

Hackberry (Otis): I am one of the poor cousins of the elm, and am little known. I am sometimes called the Nettle tree, and I am afraid Michigan people are not on speaking terms with me. Allow me to tell you about my German relative, the Luther Elm, near Worms. It is said to have been planted as follows: A bigoted old lady, thrusting a stick in the ground, declared her resolution not to accept the new faith until that dry stick became green. The fact that it did so proved the interest taken by trees in the preservation of orthodoxy.

Red Mulberry (Robert): I am another obscure cousin of the elms, and one not often seen in Michigan. The birds are fond of my berries, and the wood is as valuable as cedar for posts. Let me praise the elm.

"Hail to the elm! the brave old elm!

Our last lone forest tree,

Whose limbs outstand the lightning's brand,

For a brave old elm is he!

For fifteen score of full told years
He has borne his leafy prime,
Yet he holds them well, and lives to tell
His tale of olden time."

White Oak: Let us all repeat the lines of N. S. Dodge
in praise of the Queen of the Forest. (All unite.)

"Then hail to the elm, the green-topped elm,
And long may his branches wave,
For a relic is he, the gnarled old tree,
Of the times of the good and brave."

White Oak: We will have another song about the
birds, or any other subject. (Song.)

White Oak: We have heard nothing from the
Willows.

Willow (Marion): I live near the water, and my wood
is made into the strangest things—artificial limbs, tooth-
picks, ball clubs, and gunpowder. Some of us are called
"Pussy Willows." Elizabeth Allen has written this
lovely poem to my sister, the Weeping Willow, of Eu-
rope, who has been for years mourning something to us
unknown:

"O, Willow, why forever weep,
As one who mourns an endless wrong,
What hidden woe can lie so deep?
What utter grief can last so long?
Mourn on forever, unconsolated,
And keep your secret, faithful tree,
No heart in all the world can hold
A sweeter grace than constancy."

The Poplar (Cara): There are five sisters of us Poplars who live in Michigan. One is called cottonwood, and two are called aspens. We are cousins of the willows and all belong to the willow family. I will read some lines of the poets:

“Why tremble so, broad aspen tree?
Why shake thy leaves, ne’er ceasing?
At rest thou never seem’st to be,
For when the air is still and clear,
Or when the nipping gale, increasing,
Shakes from thy boughs soft twilight’s tear,
Thou tremblest still, broad aspen tree,
And never tranquil seem’st to be.”

White Oak: Our exercises would not be complete without hearing from the members of the Pine family, or cone-bearing trees.

White Pine (Sylvia): I am one of the tallest and largest, most common and well known and valuable trees of the state. In Europe, where some of my number have been introduced, they often call me Weymouth Pine. My leaves are long, light green, and in clusters of five. As a long-lived and beautiful tree for ornamenting rural grounds and parks, I take a high rank, while an immense amount of valuable timber is cut from my wood.

White Oak: Let us hear from another Pine of Michigan.

Red Pine (Naoma): I am often called Norway Pine,

though I do not know why. I never lived in Norway, but am only found in North America. I am a tall, straight tree, with long, evergreen leaves, in clusters of two. I grow slowly, making valuable timber, which is much harder than that of white pine. For ornamental purposes I much resemble Austrian pine, though much superior to that tree, if we rely on the opinions of noted horticulturists.

White Oak: The White Pine and Red Pine have a sister Pine in Michigan. We shall now give her an opportunity to speak.

Grey Pine (Rose): I am a tree of small size, found on poor land in Northern Michigan. When young my growth is rapid; my leaves grow in pairs and are quite short. My wood abounds in pitch. I am known by a variety of names, as Scrub Pine, Jack Pine, Buckwheat Pine, Black Pine, Crocodile Pine, but the name I like the best is *Pinus banksiana*. I want to tell you what Ruskin says: "The tremendous unity of the pine absorbs and molds the life of a race. The pine shadows rest upon a nation. The northern people, century after century, lived under one or other of the two great powers of the pine and the sea, both infinite. They dwelt amidst the forests or they wandered on the waves, and saw no end nor any other horizon. Still the dark green trees or the dark green waters jagged the dawn with their fringe or their

foam, and whatever elements of imagination or of warrior strength or of domestic justice were brought down by the Norwegian or the Goth against the dissoluteness or degradation of the south of Europe, were taught them under the green roofs and wild penetralia of the pine."

White Oak: We have another cone-bearing tree in attendance. I call on

Hemlock Spruce (Agnes): I have been called by students in art and botany and horticulture "the most beautiful coniferous hardy tree yet known." I grow to a good height and acquire a large size. My evergreen leaves have delicate tints, my young branches droop gracefully. As a timber tree I do not claim the highest honor. My bark is valuable for tanning leather.

White Oak: There are two other sister evergreens called "Spruces" I see in the audience.

Black Spruce (Rhoda): I abound in swamps in Northern Michigan. I am often used for Christmas trees on festive occasions, and boys and girls search over me for a supply of first-class gum. I am not responsible, though, for all the gum that goes by my name. Within a few years my wood has been largely used to make white paper.

White Oak: I recognize another evergreen. I call on

Red Cedar (Clara): In summer my leaves are beautiful, but in winter they become brown. I am found only sparingly in any part of the world, though I am the

most widely distributed of any tree in the United States. I grow slowly, and produce a beautiful red, fragrant wood, which is soft and very durable. My wood is now mainly limited to the making of lead pencils.

White Oak: Let us next hear from

Balsam Fir (Alice): I am a rather small, slender evergreen, found in swamps, though often cultivated as an ornament about dwellings. I arrive at my prime when about fourteen years of age.

White Oak: I shall now call on

Arbor Vitæ (Maud): I thrive in the swamps of the North, and afford shelter to wild animals. I am often called White Cedar, and I furnish most of the telegraph poles, some fence posts, railway ties, and blocks for paving streets. I take a high place as an ornamental tree.

White Oak: We have now heard from all the cone-bearing evergreen trees who are present. There is another tree of the state, not here present, which is cone-bearing, and belongs to the Pine family. I refer to the Tamarack.

OTHER MATTERS.

White Oak: There are some other matters, appropriate to Arbor Day, which demand our attention at this time. How do the trees of Michigan compare in beauty and variety with those of Great Britain, of which we read so much?

Susie: The farther north we go, the fewer kinds of trees we find; the farther south, the greater variety. Great Britain and Ireland contain more than twice the area of Michigan. They have one basswood, not as good as ours; one very small maple, one cherry, one small ash, two elms, two poplars, one beech, one small birch, one pine, one oak much like our white oak. Great Britain has about ten species of trees native to her soil, while Michigan, with half the territory, has about ninety species, or nine times as great a variety.

White Oak: For some interesting points in reference to nuts and seeds I call on

Red Maple: Last autumn the hazels, beeches, chestnuts, oaks, hickories, walnuts, and buckeyes matured their fruit, and with this maturing the burrs, or cups, or husks opened, or the stems snapped in two at a joint which began to form months before. If a burr or nut held fast too tenaciously, the frost made it willing to drop, and down it went with hundreds of others among the leaves. The leaves, with the help of the shifting winds, gently covered the fruit—or some portions of it. The leaves make the best kind of protection from dry air and severe cold, and they come just at the right time. All the seeds are not covered, but Dame Nature is generous. She produces an abundance; enough for seed and enough to feed the birds, squirrels, and other animals.

White Oak: We want to hear a word about Nature's tree planters, the squirrels, birds, and other animals.

Basswood: The squirrels eat many nuts, but carry a portion to some distance in every direction, where they plant one or two in a place. It may be the thought of the squirrel to return at some future time of need, but his bump of locality is not well developed, or he has laid up more than he needed. At all events some of the nuts are allowed to remain where he planted them. In this way he is a benefit to the trees, and pays for the nuts he eats. He has not lived in vain, for he is a tree planter and believes in arboriculture. His Arbor Day comes in autumn, and he needs no governor's message to stimulate him to his work.

White Oak: This subject will be continued by

White Spruce (Adeline): Many of our trees and shrubs produce a fleshy fruit or berry. Among them are the mountain ash, service berry, wild crab-apple, hawthorn, cherry, holly, viburnum, pepperidge, hackberry, mulberry, sassafras, wild plum, persimmon, pawpaw, cedars, and junipers. Many of these, when ripe, are rendered conspicuous by brilliant colors. The fruits are eagerly sought by grouse, turkeys, deer, bear, or other animals. In most cases the seeds of such fruits are protected by a very firm covering, and are not digestible. They are sown broadcast by wild animals, under circumstances

most favorable for germination. The birds, too, belong to the society of tree planters.

White Oak: We will next listen to some accounts of the wind as a sower of seeds.

Sassafras (Iona): Some trees produce dry seeds or seed-pods, and usually drop only a portion in autumn. They hold on to some seeds with considerable tenacity. Among these are the buttonwood, basswood, ironwood, blue beech, box-elder, hop tree, tulip tree, the ashes, catalpa, locust, judas tree, birches, alders, larches, pines, spruces. The fruit or the seed is thin, or provided with wings, which distribute them as they fall, or after they have fallen. In winter it needs but a slight packing of the snow to bear up the seeds. At such times, some of the seeds are torn from the trees by the wind, and may be seen sliding along like miniature ice-boats, often half a mile or more from the nearest tree. The wind also aids in transporting the seeds of our elms, maples, willows, and poplars.

White Oak: Next listen to something more about seeds.

Red Bud (Cynthia): A seed is a young plant and is packed ready for transportation. It has a tiny stem, some seed leaves, and a terminal bud. The mother tree, before casting off her progeny into the world, did not fail to give it a little outfit in the form of starch for food

stored up in or surrounding the thick seed-leaves. As the young chicks while in the shell are nourished by the yolk of the egg, so the young oak or maple subsists on the starch stored up before ripening.

White Oak: When do our trees make their growth and how do they get ready for the next year?

Box-elder (Nina): Most of our trees put forth their new growth during a few weeks in spring or early summer. Do you wonder what they are doing during the rest of the warm weather? They are by no means idle. They may be perfecting flowers and seeds, but all of them are busy getting ready for the next winter and spring. Through the influence of light and heat the green leaves are forming starch, which is transported and stored in the pith, young wood, and bark. The young leaves and stems are started and arranged, packed in cotton, covered by scales, and in some cases the scales are protected by pitch or varnish.

White Oak: Next in order will be a few words in regard to the tree as a community.

Buckeye (Douglas): A tree is a composite being. A kind of community by itself. The leaves and limbs are all the time striving with each other to see which shall have the most room and the most sunshine. Each strives for all he can get. While some perish in the attempt, or meet with only very indifferent success, the strongest of

the strongest buds survive. Each leaf helps to sustain the limb which carries it, and each limb furnishes some nourishment to the common trunk for the common welfare. The tax is always adjusted according to the ability of each to contribute. As the limbs of a tree are constantly striving for the mastery, so each bush and tree in grove or forest is striving with others for the mastery. The weakest succumb to the strongest; some perish early, some lead a feeble existence for many years, while even the strongest are more or less injured. With plenty of room, the trunk will be short, the branches many and wide-spread; where crowded, the lower limbs perish for want of light. Dead limbs fall to the ground to protect and enrich it for nourishing the surviving limbs and the trunk. The scars heal over, more limbs perish as new ones creep upward, and thus we find tall, clean trunks in a dense forest.

White Oak: To be successful, it is very important to know how to gather and care for seeds and nuts.

Yellow Wood (Robert): Gather the seeds or nuts of trees when ripe, and, if convenient, plant them where the trees are expected to remain. In this list we include especially the trees which have long tap roots, and do not easily transplant, such as the tulip tree, the hickories, the oaks, the walnuts, and chestnuts. The seeds of elms and maples are not easily kept over winter. Seeds of

evergreens, the larch, and the locusts may be dried and kept as grain is kept. Many seeds and nuts may be mixed with an equal bulk of sand as it is dug from a knoll, and buried a few inches or a foot below the surface. In spring they may be carried to the garden and planted. Soak seeds of locust and honey locust in hot water till the outer covering softens, and then plant. Soak seeds of evergreens three or four days in water, changed daily, and then plant very shallow in rows a few inches apart in rich loam, well screened by lath, brush, or muslin. See that weeds do not rob the young plants of light, room, and nourishment. Evergreens in small quantity, when small and two or three years old, can be purchased of experts more cheaply than they can be raised at home. These can be set in rows and cultivated for a few years like Indian corn. For further details you are advised to read copies of our state horticultural reports, take lessons of a nurseryman, or go to the agricultural college.

White Oak: It is of little use to plant seeds or buy trees, unless we know how to handle them while moving.

Kentucky Coffee Tree (Hiram): In taking up a tree, whether large or small, do not twist it about so as to break or bend the roots abruptly. Get all the roots you can afford to, remembering that a tree will not grow without roots. When out of the ground keep the roots constantly covered with soil, moss, damp straw, or some-

thing else. The roots are far more sensitive to dry air than are the parts above ground. No one need wonder that trees carted into town with short roots exposed to dry air, often fail to grow, or lead a precarious life for years. Study the structure and the physiology of a tree and treat it as one who always makes everything thrive which he cares for.

White Oak: How shall we care for the trees after planting?

Apple Tree (Hannah): To set a tree so as to insure its thrifty growth, place it but little deeper than it was while growing. Have the soil well pulverized and pack it closely about the tree. After all this trouble, do not court disappointment in the slow growth or death of a favorite tree, but dig or rake the ground every week or two, all summer for three to five years, for a distance of four feet or more each way from the tree. If this is impracticable, place a mulch of something covering the space above mentioned.

White Oak: After planting, trees sometimes become too thick. What shall we do?

Pear Tree (Andrew): A tree, like a child, is a living, organized being, and keeps changing as long as life lasts. It is not best merely to set as many trees as we expect to remain for a life-time, but plant them more thickly, with a view to removal. Here is where ninety out of a hundred

fail. They do not keep an eye on the growth and trim or remove trees until they have crowded and damaged each other beyond recovery. In most instances a few large, well-developed trees should grow where many small ones were planted years before. It needs courage and judgment to remove some favorite tree that others may continue to spread and make a symmetrical growth.

White Oak: Next will follow something in reference to the flowers of trees.

Bitternut (Silas): With rare exceptions, our trees bear flowers which are inconspicuous. The elms and the maples produce flowers in spring before the leaves appear. Most have the staminate and pistillate flowers on different parts of the tree or on different trees. The wind or gravity carries the pollen to the pistil, so there is no need of sweet odors or a gay display of flowers to attract bees and butterflies and moths to carry the pollen. Compensation is well displayed in Nature. If the tree has not gorgeous or fragrant flowers, it has a large size and often a beautiful form.

White Oak: We should learn to love trees and to associate them with the generous hand who planted and cared for them.

Wild Plum (Ezra): I will tell you something which was written by Washington Irving: "There is something noble, simple, and pure in a taste for trees. It argues, I

think, a sweet and generous nature to have this strong relish for beauties of vegetation, and this friendship for the hardy and glorious sons of the forest. There is a grandeur of thought connected with this part of rural economy. It is worthy of liberal, and free-born, and aspiring men. He who plants an oak looks forward to future ages, and plants for posterity. Nothing can be less selfish than this. He cannot expect to sit in its shade nor enjoy its shelter; but he exults in the idea that the acorn which he has buried in the earth shall grow up into a lofty pile, and shall keep on flourishing and increasing and benefiting mankind long after he shall have ceased to tread his paternal fields."

White Oak: We will hear what O. W. Holmes says on this subject.

Tamarack (Elias): Dr. O. W. Holmes says: "I have written many verses, but the best poems I have produced are the trees I planted on the hillside which overlooks the broad meadows, scalloped and rounded at their edges by loops of the sinuous Housatonic. Nature finds rhymes for them in the recurring measures of the seasons. Winter strips them of their ornaments, and gives them, as it were, in prose translation; and summer reclothes them in all the splendid phrases of their leafy language. What are these maples and beeches and birches but odes and idyls and madrigals? What are these pines and firs and

spruces but holy rhymes, too solemn for the many-hued raiment of their gay, deciduous neighbors. As you drop the seed, as you plant the sapling, your left hand hardly knows what your right hand is doing. But Nature knows, and in due time the power that sees and works in secret will reward you openly."

White Oak: This concludes what we had on the programme for this convention.

Hemlock: I move we have some more music and then adjourn.

White Oak: If there be no objections, we shall have the music.

White Oak: This convention stands adjourned until again convened by the proper authorities.

ARBOR DAY EXCERPTS.

WHAT A TREE IS.

An unknown author says:

To many men a tree is known only in its commercial point of view; it is so many feet of uncut timber, or so many pecks of nuts; but the man who lives close to Nature learns to know it differently.

Yon oak, writes the German Lichte, which grows beside my farm-house, was planted an acorn two centuries ago by my ancestor. Five generations have been born and died beneath it. As I look up into its protecting shadow, or hear its solemn whisper, can I doubt that its life has some mysterious connection with that of my family, and that, in its dumb way, it shares our joys and our sorrows?

The hunters and trappers in the Appalachian mountains speak of trees precisely as they do of human beings; this one is "good-humored and friendly;" that, "cantankerous and surly." The black balsam, they aver, knows a dark secret, and grows only on bare, solitary peaks, "as if it had a murder to think of," while the pecan tree is fond

of young people, and will not thrive near a house in which there is no child.

Blindfolded or in the darkest night these mountaineers can recognize the different kind of trees by their "voices," as they call the rustling of their boughs. They have a store of singular facts to prove the unaccountable loves and hatreds between different trees, the world-old antipathy known to all woodsmen between the oak and the pine, for example, or that between the ash and hickory.

Beside the giant trees of California, there are certain famous patriarchs in the forests of the South which are regarded with universal reverence and affection. Two cedars in the Nantchela mountains are estimated to be more than a thousand years old, and a live oak on the Gulf coast is believed by some persons to antedate the Christian era.

It is probable that the most magnificent trees on the continent are a group of gigantic magnolias in the Attakapas, Louisiana. The Comte de P——, a French lover of trees, hearing of these majestic growths, made a journey to Louisiana to see them. The old Swiss horticulturist who had them in charge thus described his visit:

"He had never seen a magnolia. I took him through the woods, that he should not see these giants until he was close upon them. They stand like kings upon a high hill,

each one perfect in shape, crowned with crimson flowers, draped in moss from head to foot. The sun shone on them; the wind stirred the moss like silvery veils.

“When he saw them he drew his breath and stopped short. Then he went up and put his arms about the trunk of one, and the tears rolled down his cheeks, and I—I loved him like a brother!”

Between these men and the trader, who sees only lumber in a tree, there is the same difference that there is between the man who finds music only a senseless noise, and him who hears in it messages of divine import to his soul.

Nature gives to us only that which we are able to receive from her; to this man crops of oats; to that man strength and repose. The boy or girl who would come close to her must train not only eye and ear, but heart, to comprehend and receive her language.

JOAQUIN MILLER ON ARBOR DAY.

The following poem was read by him at the first festival of tree planting, celebrated early in 1887, at Yerba Buena, California.

Against our golden orient dawns
We lift a living light to-day,
That shall outshine the splendid bronze
That lords and lights the lesser bay.

Sweet Paradise was sown with trees.

Thy very name, lorn Nazareth,

Means woods, means sense of birds and bees

And song of leaves with lisping breath.

God gave us mother earth, full blest

With robes of green in healthful fold;

We tore the green robes from her breast!

We sold our mother's robes for gold!

We sold her garments fair, and she

Lies shamed and naked at our feet!

In penitence we plant a tree;

We plant the cross and count it meet.

For this, where Balboa's waters toss,

Here in this glorious Spanish bay,

We plant the cross, the Christian cross,

The Crusade Cross of Arbor Day.

What conqueror in any part of "life's broad field of battle" could desire a more beautiful, a more noble, or a more patriotic monument than a tree planted by the hands of pure and joyous children, as a memorial of his achievements? What earnest, honest worker, with hand and brain, for the benefit of his fellow men, could desire a more pleasing recognition of his usefulness than such a monument, a symbol of his or her productions, ever growing, ever blooming, and ever bearing wholesome fruit?—*Benson J. Lossing.*

The wealth, beauty, fertility, and healthfulness of the country largely depend upon the conservation of our forests and the planting of trees.—*John Greenleaf Whittier.*

The celebration of Arbor Day fosters a taste for tree planting, especially among school children. Through its kindly influences, every school yard will, in a few years, be provided with grateful shade, and the pupils will acquire instruction through the planting of trees. It is a beautiful custom, and is constantly growing in favor.—*Thomas Meehan.*

When we plant trees, we are doing what we can to make our planet a more wholesome and happier dwelling-place for those who come after us if not for ourselves.—*Oliver Wendell Holmes.*

The project of connecting the planting of trees with the names of authors is a beautiful one, and one certain to exert a beneficial influence upon the children who participate in these exercises. The institution of an "Arbor Day" is highly commendable from its artistic consequences, and can not fail to result in great benefit to the climate and to the commercial interests of the country when it becomes an institution of general adoption.—*Prof. B. Pickmann Mann, son of Horace Mann—extract from letter.*

THE MURMURING PINE.

Thou wilt not tell me, O, murmuring pine tree !
 What thou art whispering, day by day ;
 I cannot guess thy song's vague burden,
 And cares are calling me far away.
 And so I must go from thy half-guessed secret ;
 Thy mystic spell must not hold me long ;
 Mine is the strife of the far-off city,
 Thine, to murmur thy woodland song.

—J. S. Cutler.

“What gnarled stretch, what depth of shade is his !
 There needs no crown to mark the forest's king.”

This poem is one of the finest tributes to the *moral* beauty of a tree which is to be found in our literature. Mr. Lowell has also written poems on the pine, the birch, the willow, which are frequently used on similar occasions.

A popular favorite for Arbor Day is the “Forest Hymn” of Bryant. A beautiful poem is “The Pine Tree,” by Ralph Waldo Emerson. There is a fine passage upon the mountain ash in Wordsworth's “Excursion.”

Shakespeare's “Under the Greenwood Tree” could either be said or sung on Arbor Day. “Woodman, Spare That Tree,” by George P. Morris, has been set to easy music, and there is the song of “The Brave Old Oak,” once often heard in our concert rooms. The song by Charles Dickens upon “The Ivy Green,” in “Pickwick,” is interesting because Dickens wrote it, and may serve its turn.

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