

Table of Contents

Introduction and Some Precepts

| | |
|---------------------|---|
| Introduction | 1 |
| Some Precepts | 3 |

Chapter 1

A Year in the Life of Your Tree

| | |
|---------------------------------|----|
| Dormancy, Spring Wake Up | 5 |
| Buds, Roots, Mycorrhizae | 6 |
| Liquid Transport Upward | 7 |
| Liquid Transport Downward | 8 |
| Secondary Growth | 10 |
| Defence | 12 |
| Early Summer | 13 |
| Fall/Winter | 15 |

Chapter 2

Working with Trees - Theory and Practice

| | |
|---|----|
| Bud Scars | 20 |
| Tree Architecture | 24 |
| <i>Branch Collar Identification</i> | 25 |
| <i>Included Bark</i> | 27 |
| <i>Co-dominance</i> | 29 |
| <i>Tree Repair</i> | 30 |
| Hardiness Zones | 31 |
| Soil, Watering and Fertilizer | 33 |
| <i>Soil</i> | 33 |
| <i>Watering</i> | 35 |
| <i>Fertilizer</i> | 37 |
| Planting | 38 |
| <i>Analyse Your Planting Site</i> | 38 |
| <i>Purchasing Your Tree</i> | 39 |
| <i>Planting at the Root Crown</i> | 40 |
| <i>Strangled Tree</i> | 41 |
| <i>Staking the Tree</i> | 43 |
| <i>Watering the New Tree</i> | 43 |
| Tree Pruning Theory | 44 |
| <i>Tools</i> | 44 |
| <i>Why Prune?</i> | 47 |

| | |
|---|----|
| Shrub Pruning Theory | 58 |
| <i>Pruning for Size Control</i> | 58 |
| <i>Full Cycle</i> | 59 |
| <i>Little Tree Method</i> | 59 |
| <i>Pruning Conclusion</i> | 60 |
| Gauging the Quality of Your Pruning Cuts | 60 |
| When Should a Tree Be Removed? | 63 |
| Trees and Their Interactions with Other Organisms | 63 |

Chapter 3

Trees and Shrubs - Descriptions, Strengths and Problems

| | |
|---|-----|
| Trees and Shrubs - Descriptions, Strengths and Problems | 70 |
| Ash | 71 |
| Aspen | 73 |
| Birch | 76 |
| Burning Bush | 78 |
| Caragana | 78 |
| Cherry Shrubs | 80 |
| Cherry Trees | 81 |
| Conifer Introduction | 84 |
| Conifers | 85 |
| <i>Zone 3's Best Conifer Trees</i> | 85 |
| <i>Pine</i> | 86 |
| <i>Spruce</i> | 90 |
| <i>Fir</i> | 92 |
| <i>Larch</i> | 93 |
| Spruce Problems | 94 |
| <i>White Pine Weevil</i> | 94 |
| <i>Yellow-Headed Saw Fly</i> | 94 |
| <i>Spider Mites and Adelgids</i> | 94 |
| <i>Cytospora Canker</i> | 95 |
| <i>Fall Needle Drop of Conifers</i> | 96 |
| <i>Needle Casts of Spruce</i> | 96 |
| <i>Rhizophaera</i> | 96 |
| <i>Isthmiella</i> | 97 |
| Pine Problems | 98 |
| <i>Pine Needle Scale</i> | 98 |
| <i>Western Gall Rust</i> | 99 |
| <i>Juniper Hawthorn Rust</i> | 99 |
| Conifer Shrubs | 100 |
| Cotoneaster | 102 |
| <i>Oyster Shell Scale</i> | 103 |
| Cranberries | 104 |
| Currants | 106 |
| Dogwoods | 107 |

| | |
|---|-----|
| Zone 3 Hardy Tree Fruit | 107 |
| <i>Eating Apples</i> | 108 |
| <i>Apricot</i> | 108 |
| <i>Saskatoon (serviceberry) Varieties</i> | 108 |
| <i>Dwarf Sour Cherries</i> | 108 |
| <i>Black Currant</i> | 109 |
| <i>Red Currant</i> | 109 |
| <i>Plums</i> | 109 |
| <i>Pears</i> | 109 |
| Elders | 110 |
| Elms | 111 |
| Flowering Crab Apples | 114 |
| <i>Whites</i> | 115 |
| <i>Purples</i> | 115 |
| <i>Pinks (Rosy blooms)</i> | 116 |
| <i>Fire Blight</i> | 116 |
| Forsythia | 118 |
| Hawthorns | 119 |
| Honeysuckle | 121 |
| Lilacs | 122 |
| Linden | 125 |
| Maples | 126 |
| Mock Orange | 128 |
| Mountain Ash | 129 |
| Native Shrubs | 130 |
| Ninebark | 133 |
| Oaks | 134 |
| Ohio Buckeye | 136 |
| Poplars | 137 |
| Russian Olive | 138 |
| Walnuts | 139 |
| Willows | 140 |

Chapter 4

Some Thoughts on Trees

| | |
|--|-----|
| Trees Are Good Company | 143 |
| Trees Are Creators of Sacred Space | 144 |
| Large Old Tree In a Public Space | 144 |
| Meet the Trees | 144 |

| | |
|--------------------|-----|
| Bibliography | 147 |
|--------------------|-----|

| | |
|-------------|-----|
| Index | 149 |
|-------------|-----|

| | |
|---------------------------|-----|
| List of Latin Names | 155 |
|---------------------------|-----|