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LANDSCAPING THE HOME

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LANDSCAPING THE HOME

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Research Station

Canada Department of Agriculture

Summerland, B. C.

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LANDSCAPING THE HOME. I. PRINCIPLES AND FIRST STEPS

Most home owners at some time are confronted with the task of landscaping their property. This problem might involve initial planting around a new home, or revision of the garden scheme around an old one. Frequently, residents are not wholly satisfied with the way their property is laid out but don't know what should be done to improve it. In all cases, certain basic principles and methods apply. An understanding of these generally insures against gross and costly mistakes, and greatly intensifies the interest and actual enjoyment inherent in the task.

The purpose to keep in mind when planning a garden or landscaping a home is not complex. It is merely to combine the maximum of utility with the utmost in beauty or esthetic value.

Just as in designing a home, there is limitless scope for expression of individuality in planning a garden. The grounds should be made as presentable as possible to the public eye. Equally important, they must serve to the maximum degree the requirements or needs of the inhabitants.

If gardening is of interest to the resident, the over-all design of the garden can be quite elaborate and very appealing. On the other hand, if time and money are begrudged for maintenance, the design should be fairly simple. It can be attractive nonetheless. In any event, it pays to keep in mind that over the years maintenance usually far outweighs the effort and cost of the initial planting.

The fundamental principles to observe in planning are:

- (1) make the basic plan as convenient and functional as possible;
- (2) tie the planning and proposed planting to the neighboring homes and community;
- (3) harmonize with the natural surroundings;
- (4) follow conventions which do apply to certain architectural designs when these are pertinent;

- (5) observe simplicity of design with a minimum of ornateness or fussiness;
- (6) provide those features which best suit the living habits of the family;
- (7) provide privacy where this is desirable.

The very first step in designing a landscape project, and one which cannot be too strongly recommended regardless of whether the landscaping involves a new garden or modification of an old one, is to lay out the entire property to scale on paper (see figure 1). Graph or "cross-hatched" paper, ten squares to the inch, is generally convenient for this, where a scale of one inch on the paper represents ten feet on the ground, or one small square on paper represents one square foot. Other scales can be used, of course. Property lines, boulevards, public walks and road lines, all buildings, and possibly existing trees if they are to be retained, should be located accurately on this plan. Sharp changes in contour or slope, and rock outcroppings can be indicated lightly in pencil. Also, it is a good idea to locate, accurately, septic tanks, gas and water lines, and overhead wires. All entrances, basement and main floor, to all buildings, and at least roughly, the main floor plan of the house including windows, should be clearly indicated. From this basic scale plan tracings or copies can be made, on which the proposed landscape features can be sketched, erased and changed about at will and at no cost whatever, whereas similar blunders made on the ground can be very expensive indeed. It is a good idea, at this time, to contact City Hall to determine what regulations apply regarding easements, sideline offsets, hedge allowances, and boulevard regulations, so that no expensive errors will be made in carrying out the plan. Finally, indicate by arrows at the edge of the plan those unsightly objects which you may want to screen off with trees, and those views or vistas which you want to retain and incorporate into the house and garden design.

Figure 1 is a photograph of a scale plan, (scale 1" on paper representing 10' on the ground) of a rather typical medium sized home

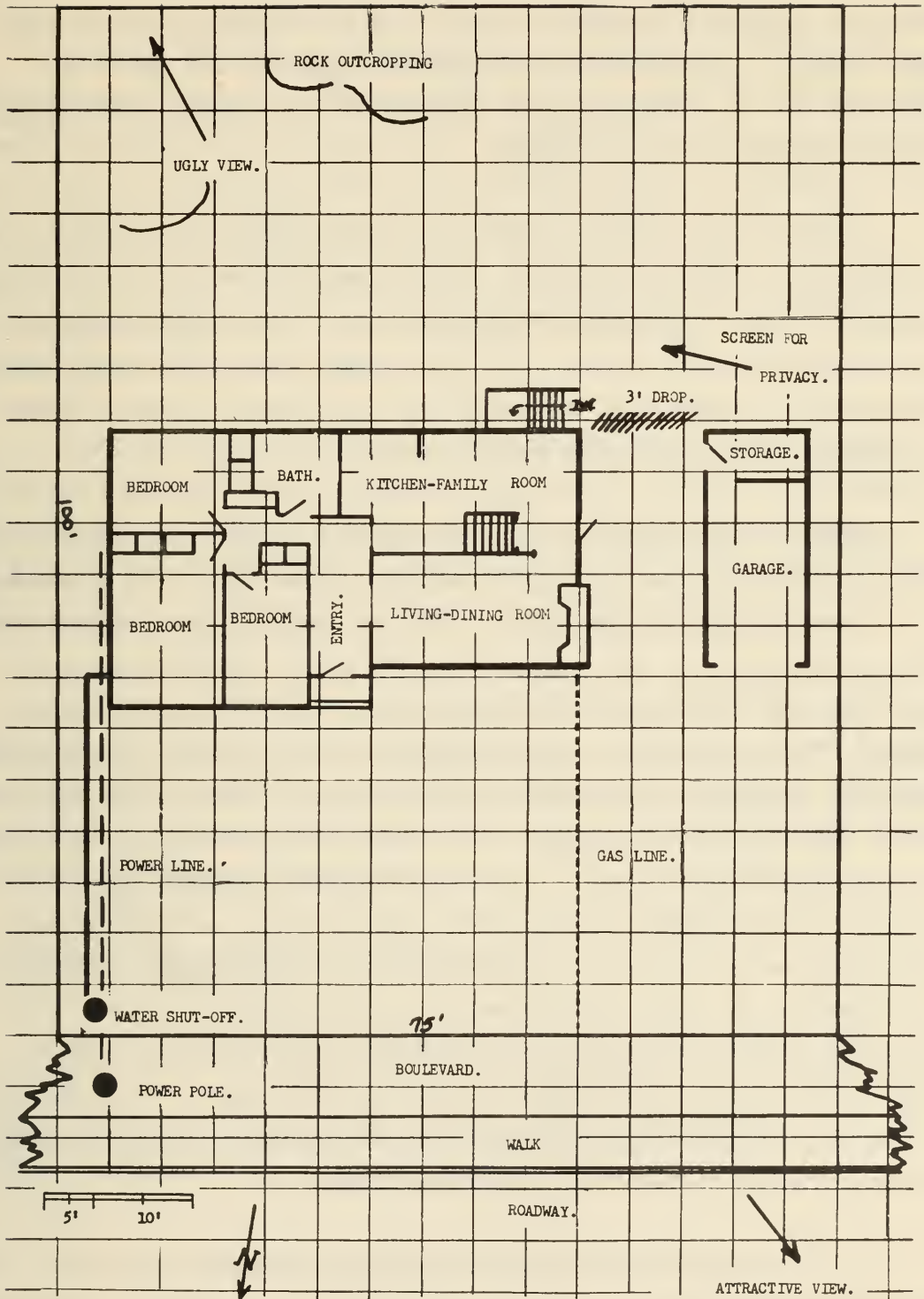


Figure 1. Photograph of basic plan of a home on a 75' x 100' lot, scale 1" = 10' (reduced 2½ times) incorporating those features which can influence the landscape design.

on a 75' x 100' city lot. The plan as presented depicts many of those pertinent features mentioned in the foregoing paragraphs which should be indicated because they can have an influence on the landscape design. All proposed architectural features and landscape plantings can be indicated quite readily on the original, or preferably on tracings of such a plan.

It also helps to have several sharp photographs of the house and outbuildings viewed from several sides, and at least one taken from a distance to show the neighboring properties. These photographs are invaluable if outside advice is to be sought, and at the same time will provide a historical record of the development of the property of specific interest to the family itself.

Once the basic plan of the property is complete, the first major decision to be arrived at is the relative proportions of the property to be used for specific purposes. (In the example, this decision has already been made re the "approach area", since the buildings are quite solidly located and the front yard is thereby clearly designated.) This will vary to some extent depending on the area of ground available excluding buildings, but basic figures which often apply are 1/4 of the area for "approach", (the front yard, visible to the public eye and including driveways and walks), 1/4 for "service area" (including kitchen garden, compost heap, cold frames, and drying yard with modification as required), and 1/2 for "living area", (the private "garden" as such, for recreation in its applicable forms). In some cases, the entire back yard can best be designated as "service area" and still be presentable, while in others almost if not all of it can be "living or play area". These are primary decisions which the owner makes to suit his particular needs.

In succeeding sections the design and development of each of the three aforementioned areas will be discussed, with specific reference to the example as a means of illustration.

PART II. THE APPROACH AREA

The front yard or "approach area" is of paramount importance in the landscape design of a home. This is the part of the garden which usually is open to the public eye. Inevitably, if there is a front door into the home, this area lying between it and the street is the part of the garden which must be crossed en route to the house. It should be attractive and interesting, warm and inviting, while retaining its primary function, that of providing easy and convenient access.

A thoughtfully designed and well executed front yard adds immeasurably to the value of a home. The design itself can be adapted to individual cases; the garden must be built around the house, and above all, the style of the garden must suit the architecture of the house and yet be in harmony with the surrounding community.

No foolproof rules can be given which if followed will lead to a satisfactory design of the "approach area". Conversely, no rules can be formulated which will guarantee against errors in design. However, there are several basic guides which if kept in mind will assist in planning a pleasing front garden.

1. Maintain Harmony with Surroundings:

First, and often most important, is to plan the garden so that it blends with those surrounding it. High hedges, tall border shrub-beries, and formal fences can be detrimental, not only to a specific design, but also to those adjacent to it.

2. Design the Approach to Suit the Architecture:

A second suggestion is to design the garden to suit the architecture of the house itself. Certain home designs are best complemented by formal or semi-formal treatment in the landscape planning. Southern and Dutch Colonial, English Tudor, Cape Cod and Spanish and many of their variations, fall into this category. Modern bungalow

and split-level designs, and particularly Ranch-style homes so popular in the West, are best suited to informal landscape treatment in keeping with the comfortably casual way of life which they portray.

Sometimes it is not a simple matter to combine the best elements of design as suited to the architecture of the house with the personal preferences of the owner, and remain in complete harmony with the neighboring homes. For example, a picket fence completely enclosing the front yard is admirably suited to a Cape Cod home design. Yet, if all homes on the rest of the block embrace the principle of the wide expanse of lawn and open approach, that picket fence is apt to look incongruous indeed. In such a situation compromise is essential to maintain harmony.

3. Combine Beauty With Utility in Locating Walks and Driveways:

Since one of the main functions of the "approach area" is to provide access to the home, walks and driveways must be provided. There is ample scope for originality and artistry in this respect, but all too often these permanent features of the front garden are located with no thought to other than the functions.

Straight lines running vertically to the street should be avoided wherever possible, though this can seldom be accomplished where one is concerned with a driveway on a city lot. In the matter of sidewalks, a little forethought can lead to better solutions. Often, the walk from the front door can be tied into the driveway, which in turn can be widened to advantage so that if cars are parked in it there remains ample space to walk beside them. If a service walk is required, this should be made as inconspicuous as possible. It pays to take every step possible to avoid cutting the front garden into strips or sections. An uninterrupted expanse of lawn makes a lot and the home look much wider than it really is.

4. Make the Garden Enhance the House:

Careful planning of the "approach" gardens and thoughtful selection of planting material (trees, shrubs, evergreens and border



Fig. 2. Sketch illustrating a poorly designed approach planting. Lawn cut up into strips, and further encumbered by specimen trees and shrubs. Expense in maintaining this type of planning would be high, with extensive lawn edging in summer and snow removal in winter. Planting is monotonous and serves to accentuate the height of the buildings.



Fig. 3. The same house landscaped in an entirely different way. Note the reduced area devoted to walks, with no loss in accessibility. Wide uninterrupted expanse of lawn, heavy plantings flanking the house, and foundation plantings of low evergreens serve to lower the building and tie it into the landscape. Group of shrubs lower left helps to balance the garage and drive, which in turn is tied to the house with trellis.

plants) can add immeasurably to the appearance and value of a home.

Desirable architectural features, and these usually include the front entrance itself, can be emphasized and made focal points for attention. Accent shrubs, selected for their shape, colour or texture but used in moderation, serve this purpose admirably.

Similarly, undesirable architectural features can be made less noticeable by judicious use of evergreen and deciduous shrubs and trees. A high foundation line, which makes a house look tall and box-like, can be lowered by placing a good foundation planting, preferably of evergreens, in front of it. In some cases, an informal rockery can accomplish the same purpose, but it should be extended well beyond the house on at least one side, and should be heavier at that side than it is in front of the house.

Medium sized to tall deciduous trees are admirably suited to framing a home. Very large-growing species are best located behind the structure, while moderate or small-growing specimens can be used at the sides near the corners. A good deal of thought and consideration should be given before trees of any size are located directly in front of and close to the house, though they sometimes are used to advantage near the street to soften road noise and when necessary to protect the home from excess sun in the late afternoons and evenings.

One of the main functions of the approach garden is to make the house look natural in its setting. If this is kept in mind, few mistakes are likely to be made.

5. Avoid "Fussiness":

The matter of personal preference does have a great influence on garden design. Sometimes the desired effect is not accomplished, and the gardener is not quite satisfied with the results of his endeavours. Often, the conclusion is that something is lacking, so to rectify this another shrub or another tree, or maybe a garden ornament, is added. This frequently makes matters worse, for the lack

of satisfaction probably was not because something tangible was lacking, but more likely, there was already too much in the garden or something was in the wrong place.

Ornateness in landscaping is a far worse fault than oversimplicity. Keep the garden balanced, adhere to a theme, but avoid monotony. Delete unnecessary curves in walkways and border edges. Keep the lawn uncluttered, and totally free of disrupting shrub specimens, (particularly formal ones), and ornate flower beds. The place for these, most landscapers will agree, is in the back yard if they must be used at all.

III. THE BACK YARD

The organization and design of the back-yard garden is much easier than the approach area. In most cases it is remote from the street, and can be made as private as one desires.

There is little or no need to adhere to conventions. Conformity with the adjacent homes is of minor, even negligible, importance. In the back yard, or private area, the home-owner can give vent to his imagination and personal wishes in comparatively uninhibited fashion.

Basically, the private garden is functional in purpose. The design and allocation of space to various uses will depend entirely on the needs of the household.

The Single-purpose Yard:

In the Okanagan many families like to spend as much as possible of the fine weather in the outdoors. The trend in modern living thus often dictates that the back yard is devoted mainly to recreational space. This in turn can be greatly varied, from one extreme where the entire space is used for a swimming pool, or courts for games such as tennis, badminton, basketball, croquet, or miniature golf, to the other where lounging furniture occupies most of the space, leaving only a portion of lawn for a children's play area.

Some families may prefer to grow large quantities of vegetables and small fruits for canning or freezing. Unless the property is an exceptionally large one, this may entail utilization of all the available space for this purpose, relegating recreation to indoor and away-from-home activities.

Where gardening is a family hobby, or where one or more members is sufficiently enthusiastic, still different arrangements can be made. The entire backyard is sometimes devoted to the growing of roses, chrysanthemums, iris, dahlias or gladiolas. Or it may be planted entirely to lawn in which a maximum of border space and

formal beds are cut.

The Multi-purpose Yard:

The above cases are exceptional, however. Generally the back yard is best dedicated to a number of uses, and if carefully planned and proportioned, can be very attractive as well as functional.

For average-sized yards, use of approximately one-third of the space for service area and two-thirds for recreation or outdoor living-room is a satisfactory arrangement. Good rules to remember in apportioning these are to plan for accessibility and convenience for the service area, and privacy and seclusion for the recreational section.

The Service Yard:

Broadly speaking, the service area is utilitarian in purpose. As such, it is not usually regarded as a thing of beauty, and is best isolated from view from the street, and from prominent windows of the house. It is a good idea to isolate this part of the yard from view by closing it in with a trellis or high hedge. As a matter of courtesy, give some consideration to your neighbors on both sides. If possible screen the service yard not only from the street and your own windows, but also from the prominent view of your neighbors. If this is not practical, at least try to locate it in such a way that it will not be the dominant view from their living- or dining-room windows.

The primary function of the service yard is space for the kitchen garden. This may not be large, but most families appreciate salad greens, tomatoes, cucumbers, and especially sweet corn when it comes directly from the garden to the table. The compost pits, an evil very necessary to a garden enthusiast, are located in the service yard, well away from all habitable buildings, as are the incinerator and the garbage cans. Cold frames too are best included in the service area, but these can and should be as close as

possible to the house or garage and a source of electricity if heat is ever needed.

In some cases, even in this modern day of electric clothes driers, pulley clothes lines or umbrella-type racks sometimes are a family necessity. If the service area is large enough, these should be included. If not, a convenient approach is a knock-down or portable umbrella-type of rack which can be inserted into a pipe in the lawn or patio when in use. The same pipe can be used for the garden umbrella pole.

The Outdoor Living-Room:

A well-balanced and comfortable back yard garden can be a source of endless enjoyment here in the Okanagan, from April through to November. The garden can be formal or informal in design, simple or elaborate in either case.

The foil for the garden can be an area of good solid lawn, preferably of tough serviceable grass, or it can be of concrete, crushed rock, brick or blocks. It can be in itself a patio, or a separate patio or porch can be installed immediately adjacent to the house.

Several trees should be planted to supply mottled shade during the hottest part of the day, but if possible some areas should be left unshaded for comfort on cooler days.

The design of the garden itself is purely a matter of individual preference. Shrubbery borders, with a few pockets of perennials and annual flowers, are less work than vast flower borders, and can be equally satisfying. Some gardeners prefer rockeries, though these need not be extensive to be appealing.

A garden pool, simple in design and carefully tied into a rockery or lawn and shrubbery border, can be a source of comfort or warm summer evenings. The comfort is largely psychological, no doubt, but very real nonetheless.

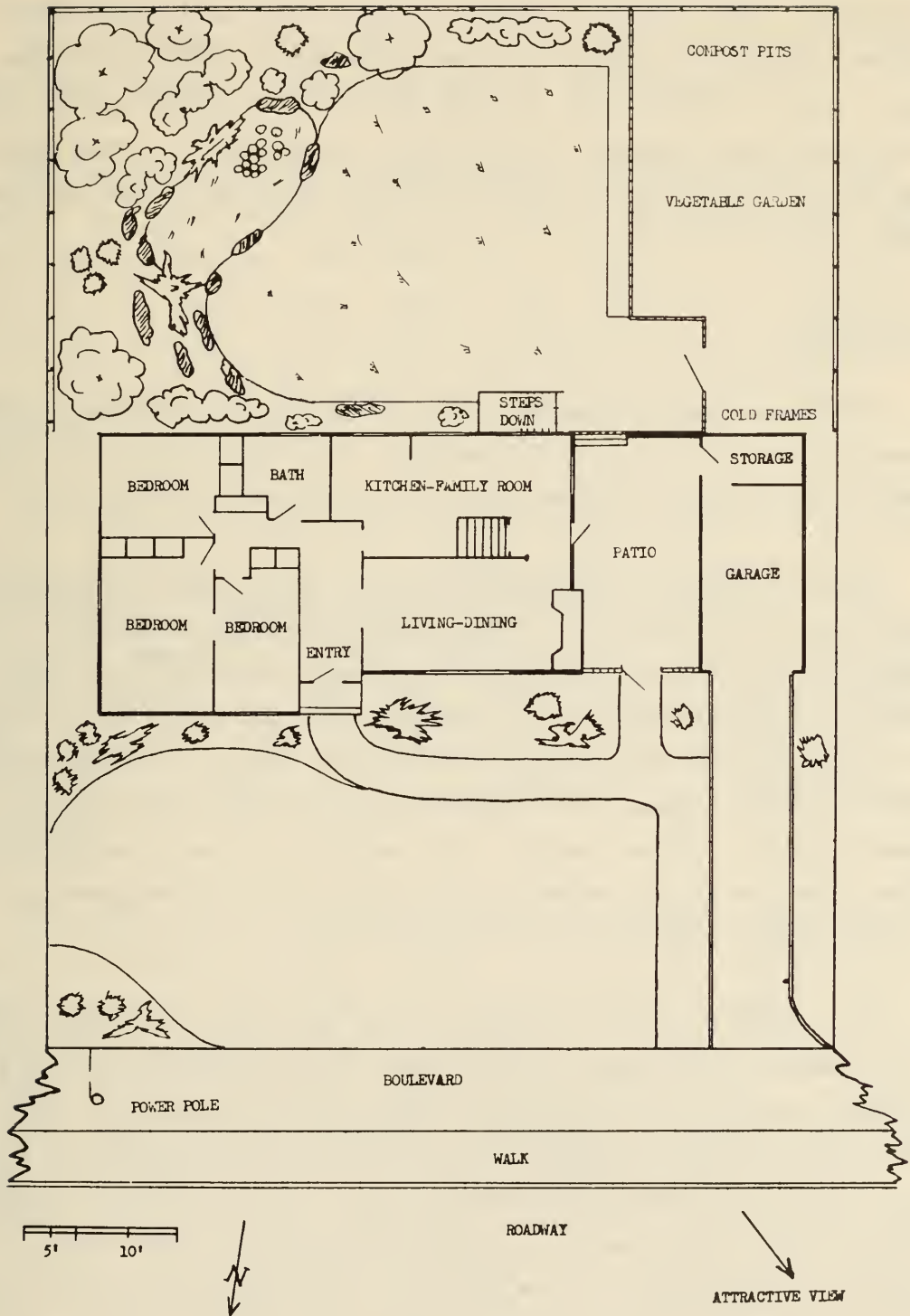


Figure 4. Photograph of a scale plan of a home on a 75' x 100' lot. Scale 1" = 10' (reduced), illustrating one example of landscape treatment of the approach, recreational and service areas.

Garden furniture completes the picture. This can be rustic, of wood or concrete, or rather elaborately cushioned and devastatingly inviting. This should be located near the house and overlooking the garden, ideally on a patio or covered porch, an extension of the house itself. Included as an item of furniture is the barbecue-pit, which has become popular in recent years, and even a very simple one can be a source of great pleasure at meal times or in the late evenings.

An Example:

The accompanying plan is used to illustrate one of many possible treatments of the property in question. The base plan of the house and lot is the same hypothetical one that appeared in Chapter I.

The treatment of the approach area or front yard corresponds with the sketch (Figure 3) of the preferred design in Chapter II. Note the minimum space occupied by walkways, with resultant lower costs of installation and snow removal. The one large area of lawn is not cut up and thus entails a minimum of edging. Shrubbery borders are used to flank the buildings and tie them to the ground, lowering their apparent height. The emphasis in the planting is to direct the eye to the entrance, the focal point of the approach, at the same time preserving the attractive view.

The location of the buildings, with the garage paralleling but not attached to the house, could lead to some problems. To run a walkway through the comparatively narrow intervening space would cut it up and render it useless and difficult to maintain. A logical approach has been used, namely to tie house and garage together at the front with a low wall, trellis and gate, to repeat this at the back of the garage with a planter or low wall only, and to convert the area between house and garage into a patio. This could be partially or entirely roofed, preferably with fibreglass, and furnished with an acorn fireplace or brick barbecue piped into the existing fireplace chimney, resulting in a delightful cool outdoor sitting-room or play area for children and adults. This roofed

patio area could be extended out to the jog in the fence to good advantage, perhaps as a later addition.

The drop behind the garage is overcome with the planter or wall, and a short flight of steps leads down to the rear garden.

The back yard itself has been divided vertically with a high trellis, into service area behind the garage, and recreational garden area behind the house. The service area includes the compost pits well away from all buildings, and the incinerator should be located in the same vicinity. Cold frames are backed to the garage storage area, leaving most of the service section free for vegetables or flowers for table use.

The treatment of the main recreation area is purely an arbitrary one. In this case the farthest corner, where there was a natural rock outcropping (indicated on the basic plan in Chapter I), has been planted heavily to screen an unpleasant view, and the foreground has been converted to a low rockery with a garden pool as the focal point of interest. This leaves an area of lawn large enough for family lounging, without becoming a nuisance from the maintenance standpoint.

The narrow strips of property between the buildings and property lines often constitute a problem. In this case they have been ignored, as they do not affect the overall landscape scheme. One approach which is used to allow the neighbors to include these strips in their plantings, and this can be mutually advantageous. Another is to use these areas for growing shade-loving plants for table decoration. The best approach of all, which admittedly is not always possible, is to locate the buildings on the lot so that similar areas are avoided. In the hypothetical example used here for illustration, we have assumed the buildings were located by the contractor, and the problem of landscaping them, as is so often the case, is left as a challenge to the home owner.

IV. FORMAL GARDENS

A century and more ago formal gardens were commonplace, both on large estates and in the landscape design of large and small city lots. In recent generations, this type of design has become less frequently seen, yet even in the world of today, and on properties which are too small to give sufficient scope for natural landscape treatment, formal gardens have a distinct place and could be more widely used.

Admittedly, the design of most of our modern homes does not lend itself to formal treatment where the approach or front yard is concerned. However, for the living area or back-yard garden, a formal treatment often is ideally suited.

A common present-day misconception is that formal gardens are by nature cold and uninviting. Nothing is farther from the truth. The terraced or parterre gardens of France and England during the 17th and 18th centuries often were huge in extent, open, cold and artificial. By contrast, however, we have only to look back to the walled or courtyard gardens of early Rome and Greece to realize how inviting a formal garden can be. Privacy was their primary aim, and comfort and relaxation were closely akin to their function as an outdoor living-room.

All formal gardens are best regarded as a transition between a house or building and its natural surroundings. For this reason, it is almost essential that any formal landscape treatment be relegated to an area immediately adjacent to such structures. Ideally, a formal garden should be planned as an adjunct to the building itself, and should be planned on a main axis of that building as indicated by one or more prominent exits. The 19th century screened porch, which in modified form is making a comeback in modern homes, and the more modern patio-porch or patio garden directly or indirectly are modifications of the formal garden of the ancient past. In many cases, a truly formal treatment in landscaping these areas would be more sa -

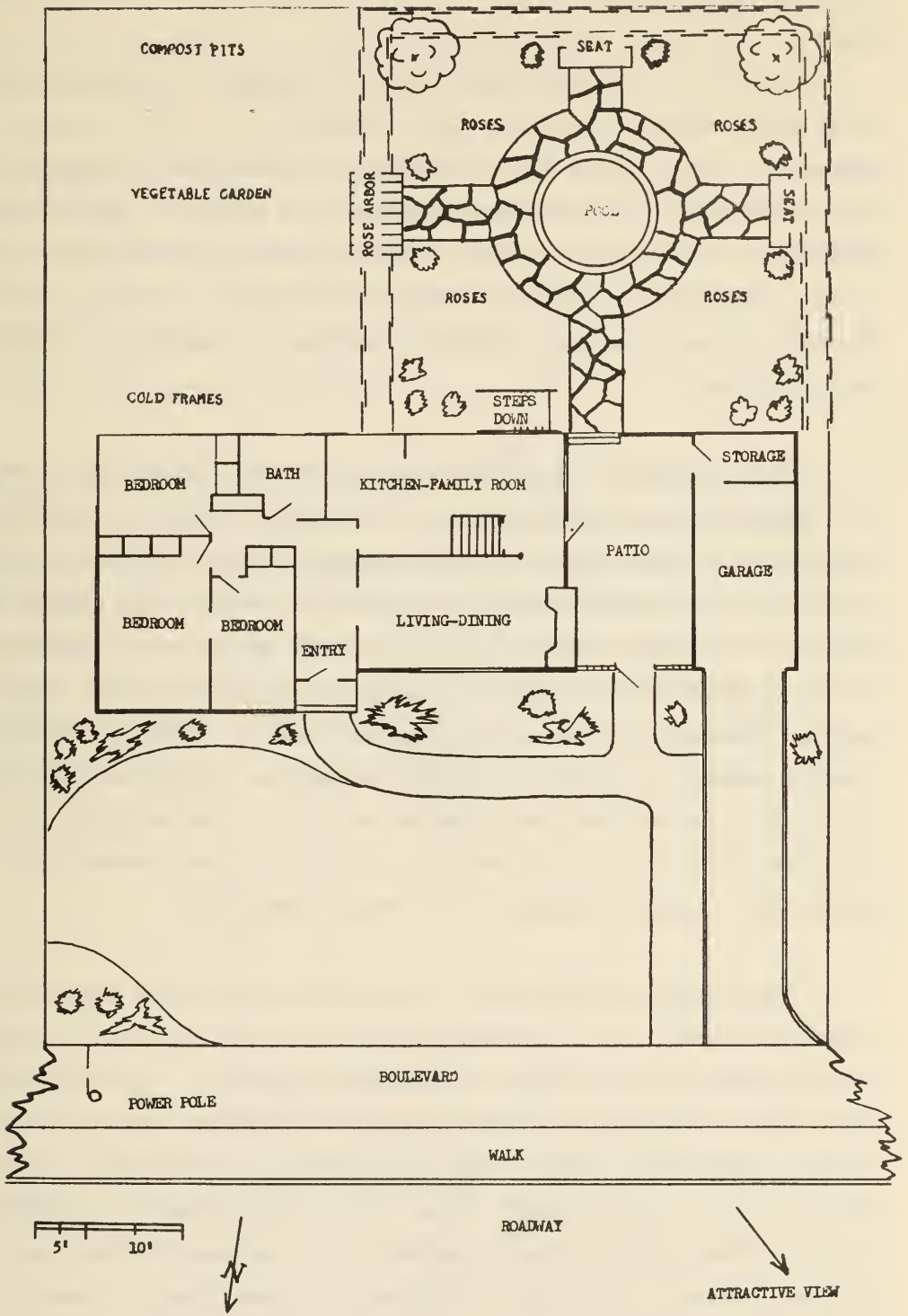


Figure 5. The same plan as depicted in Figure 4, but using a formal theme in the design of the back garden. Note, the surrounding hedge is located inside the property line. The 4 beds can be devoted to roses, or flowers or lawn without affecting the over-all design or theme.

isfying and appealing than some of the approaches commonly used.

Ideally, a private formal garden should be enclosed. Thus, certain home designs by nature lend themselves to this treatment. A "U" shaped or "L" or even a "T" shaped house surrounds the garden area on 2 or more sides. Sometimes a separate or adjacent garage or out-building serves equally well. Failing this, a formal garden should be surrounded on at least 3 and preferably all 4 sides, by brick or block or plaster walls, evergreen hedges, or carefully designed wooden fences.

The principles of formal design are not difficult to establish. The first, already mentioned, is to locate close to a building, on a main axis of that building. The second is to establish a sense of proportion, not only relative to over-all area which should be so small as to appear cramped, nor so large as to be uninviting, but equally important, proportion in the sense that length relates to width. Excessive width relative to length or depth, or excessive length relative to width, generally tend to preclude satisfaction. Desirable proportions are 3 units width to 2 units depth, or 2 or 3 units width to 4 units depth. A square is not impossible, but generally is more difficult to design adequately.

The third principle is to determine beforehand what architectural features are to predominate and to relate these in proportion or perspective to the size of the area involved. In this regard we have wider scope in a formal than in an informal design, for in a formal garden the work of man is paramount to the work of nature, whereas the desired effect in an informal treatment is quite the contrary. Thus, in a formal treatment the dominant feature may be a garden shelter or lattice structure, a formal pool, a sundial or gazing globe centering a series of formal rose beds, a garden seat, a piece of statuary, a well-head, or even a barbecue pit.

The fourth principle is simplicity. Naturally, this bears a close relationship to the third. Generally speaking, one feature carefully chosen and in proper perspective with the size of the

garden will be more effective than several. If cluttered up with too many "features", a formal garden can become fussy rather than restful, and its inherent quiet dignity will be lost.

The fifth principle is balance. This by definition is essential to formal design, where it is actually accented. In informal design it exists, but in a subtle way. Balance in a formal design functions on the main axis, but the theme, closely related to proportion, is continued on a geometrical pattern utilizing one or more sub or secondary axes which are tied to it.

The choice of planting material in a formal treatment is somewhat more circumscribed than is the case with informal planning. Usually the basis of a formal plan depends on carefully selected evergreens which are located to accentuate the architectural features. Deciduous trees and shrubs also can be used--sometimes these being of formal habit--and ample space can be left which can be planted to perennials or annuals, so broadening the interest and increasing the warmth of the design without detracting from the basic theme.

V. LANDSCAPING THE FARM OR ORCHARD HOME

We have already dealt with the fundamental principles of garden design as they apply primarily to homes on an average city lot. The same basic principles are used in landscaping the farm or orchard home, but the applications and emphases are somewhat modified.

The first step, and a particularly essential one in landscaping the suburban or rural home or farm operation, is to draw a scale plan, as was previously indicated for the city home. Use of scale or cross-hatched paper again is strongly recommended, though the choice of scale probably will be smaller than that used in planning a more restricted city lot. The perspective obtained when the entire scheme is seen on paper often leads to improvements and prevents implementation of serious oversights and drastic errors. Corrections and alterations can be made very easily and very cheaply on paper.

In one important respect, landscaping a home situated on a large estate, farm or orchard is easier than its smaller counterpart in the city or town. Because the tract of land involved is larger, and the closest neighbor is correspondingly far away, little or no thought need be given to conforming to a general pattern, design or theme already established by the neighborhood. This in itself accords much greater scope and more freedom of design and expression.

Because the extent of the garden is less severely circumscribed in the country, more emphasis can be placed by the designer in blending the home and garden into the natural surroundings. Existing views and vistas can be utilized often to great advantage, without concern about present or future obstruction. Privacy can be obtained and preserved comparatively easily and at no added cost. Also, the availability of machinery, such as tractors, hydraulic buckets and blades, discs and other tillage tools, mowers and sprayers makes the construction and in part the maintenance of a fairly large garden more feasible than it is to most townspeople.

On the other hand, there are certain aspects of country land-

scaping which demand particular emphasis. Design of the property, situation of outbuildings and services and location of the house itself should be planned for the maximum of utility and convenience relative to the major farm operations. With care, this can be done without sacrificing aesthetic aspects in any way.

1. Location of the Home:

Where a farm or orchard operation embraces a few to many acres, there often is a wide choice of locations for the home. There are distinct advantages to placing the house in a central location, as a hub for farm operations. This reduces distances and increases efficiency proportionately. It also tends to isolate the home from the outside world, which according to taste some prefer and others do not. Remoteness from the noise and confusion, fumes and dust of a major or secondary highway can be an advantage to comfortable living. On the other hand, such a location dictates an extensive system of access roads tying into the main artery, and these can be expensive. Unless adequate equipment is readily available to keep such roads open in winter, a compromise between seclusion and its alternative is advisable.

If possible, the house itself should be located on comparatively high ground, a knoll or small hill. This is particularly important where flooding or seepage is a potential source of trouble, and if nothing else, it ensures against sewage disposal problems. If the knoll or hill is high enough, it not only affords the occupants a view of the surrounding country, but also facilitates observation of the entire scope of the farm operations. On steep slopes, the design of the house should be adapted to make best use of the advantages offered, while minimizing the disadvantages as far as possible. The modern split-level design accommodates these aspects admirably.

If possible, the house should be oriented to take advantage of early morning sunshine in bedrooms, breakfast room and other rooms which are used at this time of the day. Covered patios and wide roof overhangs should be used on the South and West, to minimize the build-up of heat during long, hot summer days. Naturally occurring

protection from prevailing winds, particularly cold North winds in winter, should be used if it is available, and caution should be given to using wide expanses of glass in fully exposed locations.

Both house and outdoor recreation area should be located to take every advantage of a fine view. A pleasing vista becomes an all-important part of the furnishings, both indoors and out.

2. The Service Yard and Outbuildings:

Generally speaking, the service yard and outbuildings in any farm operation should be located close enough to the house to be conveniently accessible without encroaching on the home itself. They should not be permitted to dominate, but rather should be located as inconspicuously as possible. If the house is well placed on a rise of ground, these important facets of the farm operation should be at a lower level, and thus be kept subservient.

If barns, corrals, animal and poultry pens are a part of the farm, these should be kept far enough from the house that neither sight nor smell will become offensive to gracious living.

Implement sheds, farm workshops and gasoline, oil and paint storages, which constitute a fire hazard should be kept well away from human and animal habitation.

Ample yard space, including readily accessible loading ramps and loading platforms, should be allowed for. Modern bulk bin, palletized, or other fork-lift loading operations function best when there is ample room to manouver.

3. The Kitchen Garden and Drying Yard:

In country living, the kitchen garden often is regarded as an important factor in the home economy. It is practical to devote more space to it than is usually possible on a city lot. Also, it becomes practical to operate a large kitchen garden when machinery is readily available to mechanize some of the operations.

The kitchen garden is ideally located at the rear or to a secluded side of the house. It can act as a buffer between the house and farm service area. The site should be flat or gently sloping, preferably to the South or West, and it should be well drained and irrigable. For protection as well as for appearance, it should be fenced, and the fence may well be tied to the house. However, provision should be made to permit the entry of heavy equipment, such as tractors and rotavators.

4. Access Roads

In a farm or orchard operation, careful planning of access roads results in increased efficiency, maximum convenience and optimum returns from landscape efforts.

At certain times, business traffic involved in farm operations may be heavy. Roads should be so planned that this will not interfere with the home. Conversely, adequate planning can prevent household traffic from interfering with crucial farm operations.

The roads themselves need not be of double-lane width, particularly if visibility is unhindered and the distance is short. However, where practical, there are decided advantages to a one-directional loop system whereby in and out traffic does not conflict. Failing this, double width is advisable at least as far as the service yard.

Sharp, restricted turns should be avoided in favour of easy curves with adequate visibility in all directions from which traffic converges. Low overhanging branches and wires are dangerous.

Particular care should be taken in designing the turn-off from the highway. A Y design affords easy turns and improves visibility in all directions.

Loading areas and loading platforms should be well clear of the roads themselves so that operations do not block the access. Adequate parking space should be provided around buildings so that flow

of traffic is never impeded. Careful attention to these matters during the planning stage can result in smooth operations which by increasing farm efficiency and reducing frustration will more than pay for the extra land required.

Planning of the garden itself incorporates the same principles as previously outlined.

VI. CHOOSING PLANT MATERIALS

One of the great joys of gardening in the Okanagan, especially when one is planning his own garden, is the wide range of horticultural material which is available for planting.

Admittedly, there are limitations regarding the suitability of some materials. Hardiness is perhaps the first factor to consider, though many half-hardy species are worth growing, especially if without undue effort they can be given adequate protection to carry them through most winters. Other species do not require even this care, and can be expected to survive all but the severest winters such as might be anticipated once in 20 years or so. If a species grows and develops sufficiently quickly that it can be replaced in 2 or 3 years, its loss in a bad winter is not too serious. On the other hand, to lose a specimen which is slow to reach the fullness of maturity after caring for it for 15 or 20 years, is a devastating loss indeed, and such experiences are best avoided.

There is one large group of plants which, because they are only partially hardy, and in addition are best suited to humid climates and moist, peaty acid soils, are not recommended for planting in this area. These are members of the Heath family, the Ericaceae, and comprise in part the Rhododendrons, Azaleas, Camellias, Andromedas, Kalmias, and the Heathers. By dint of tireless effort, these wonderful plants can be kept alive here, but they seldom do well, if for no other reason than our water as well as our soil is alkaline. By and large, this group is best avoided, as are its companion plants, the Primulas and many ferns.

It should always be kept in mind that the Okanagan is an orchard area. Thus certain species, notably the Japanese large-flowering Cherries Prunus serrulata, which can host the Little Cherry Virus, cannot be accommodated in our gardens. Similarly, many other species which are closely related to our principal orchard crops (apples, pears, peaches, plums, and apricots), can harbor insects or diseases which, if not controlled, can imperil adjacent orchard plantings. Thus large-fruited flowering crabapples must be sprayed to control

Codling Moth; flowering peaches, plums and apricots must be closely watched to prevent them harboring peach borers; Hawthorns, Mountain Ashes and Quinces should be scrutinized closely to see that they don't become a source of Fire Blight infection. Proper preventive or corrective action in all such cases is the civic duty of every gardener, in the interests of the community as a whole.

In the final analysis, the choice of specific trees, shrubs, evergreens and herbaceous plants is up to the individual, and a wide range is available. Location of each can be a matter of some concern, not so much for the present as for the future, when large-growing specimens begin to reach maturity. In this respect more than in any other, the landscape designer is cautioned to look ahead 20 years or more.

If the property is a small one, most of the large evergreens, and nearly all of the large trees, are ruled out. They really should not be planted, for just as they begin to mature and become a source of real pride, they must be removed because they are blocking windows, interfering with neighbors, scraping power wires, blocking drains, or heaving sidewalks or driveways. Many equally fine and long-lived species are available which never do get out of hand.

Admittedly with most if not all gardeners, time is of the essence, and there is anxiety to have a mature garden in full beauty as rapidly as possible. Unfortunately many of our finest cultivars do not grow and develop quickly. Thus one would not be advised to plant an Oak tree for quick shade, though ultimately the Oak is one of our finest trees. Nor should one expect a rapid response from a young Florida Dogwood; a good specimen takes 10 years or more to develop, and is worth waiting for. There are two solutions to the problem. The first is to compromise on choice of materials, in favor of those which grow reasonably quickly and are reasonably long-lived and highly desirable. The second is to locate the finest but slow-growing species in the places where in the final plan they should be, and then to interplant with faster-growing species with a view to removing them before they start to crowd the permanent planting. The thinning-out process takes courage, and often is too long delayed, but if properly carried out, such a plan is a good one.

It is good practice to locate your choice of plant material on the scale plan previously referred to, indicating thereon with circles or irregular outlines not the present size, but the ultimate size of each tree and shrub and evergreen. When the shrubs go in, there may seem to be a tremendous gap between a now small evergreen and a fence, but the plan will indicate that maybe a spruce which today is only 18 inches across, in a mere 10 years time will be 8 or 10 feet in diameter.

Particular care should also be taken in designing a foundation planting. Generally speaking, evergreens and shrubs which become heavy-looking and large with age should be excluded from the foundation planting, and relegated to positions flanking the house. Emphasis should be on truly dwarf or semi-dwarf erect species, and dwarf low-spreading or fan-shaped evergreens under windows and near walks. An overpowering foundation planting detracts from the design, and adds to the apparent height of the house.

A wide expanse of green lawn acts as a foil or mat against which the garden shows to advantage. However, the effect can be spoiled quickly indeed if the lawn is cut up by beds of flowers, specimen evergreens, or too many isolated tree trunks. The overall effect, rather than restful, becomes "fidgety" and fails to satisfy.

Horticultural monstrosities should be avoided. A good example of which is the Monkey Puzzle Tree (Araucaria araucana) often seen in front of older homes at the coast, but fortunately not hardy in the Okanagan. Strangely enough, this species doesn't look too out-of-place in front of a heavily ornamented and filigreed home circa 1850, but such abortions just don't seem right in front of a modern home. Similarly, "weeping" trees, and closely clipped or otherwise mutilated specimens are best used with great caution if at all, except perhaps in a truly formal or "old-world" setting.

Plant material, like the strokes of an artist's brush, can be used to obtain various effects. Aside from the rather fleeting effectiveness of a tree or shrub in full flower, differences in foliage

size, texture and colour can be used in harmony to create a garden theme. Evergreens are useful both in the background as year-round support, in the foreground for interest, or anywhere for accent.'

It is wise to remember that tall pointed specimens accent height; spherical ones add contrast; low-spreading forms accentuate horizontal lines and can be used to reduce apparent heights. Repetition used in moderation creates harmony, while in excess it results in monotony.

Hardiness of plants is a relative thing, and in this regard a word of caution may be in order. (See Chapter VIII). In locating certain species, especially the broad-leafed evergreens, a northern exposure, particularly if sheltered from wind, is generally much safer than the warmer southern exposure. Usually on the north the ground freezes and remains frozen; snow cover stays longer, and the plants become dormant and remain dormant throughout the winter. Facing south rapid temperature fluctuations are common, winter sun can cause rapid scorching, and plants are coaxed out of their dormant state only to be badly injured when the temperature drops again.

VII. PLANT LISTS

As an aid to selecting plant materials, the following lists, grouped in various ways, have been prepared. None of these lists is all-inclusive, and certainly not everyone will be in complete agreement with everything listed. They are intended to act as a partial guide, and it is to be hoped they will add a bit to the pleasure that is to be derived from planning and building the garden and watching it grow.

LARGE CONIFEROUS EVERGREENS

<u>Abies</u> amabilis	Cascade Fir
" concolor	Silver Fir
" nobilis glauca	Blue Noble Fir
<u>Cupressus</u> nootkatensis glauca	Blue Nootka Cypress
" nootkatensis pendula	Weeping Nootka Cypress
<u>Larix</u> laricina	Hackmatack or Black Larch
" Lyallii	Alpine or Mountain Larch
" occidentalis	Western Larch or Tamarack
<u>Picea</u> abies (formerly P. excelsa)	Norway Spruce
" Engelmannii	Engleman's Spruce
" glauca	White Spruce
" pungens	Colorado Spruce
" " glauca	Colorado Blue Spruce
" " " Kosteriana	Koster's Blue Spruce
<u>Pinus</u> nigra	Austrian Pine
" pungens	Table Mt. Pine
" strobus	White Pine
" sylvestris	Scots Pine
<u>Pseudotsuga</u> taxifolia	Douglas Fir
<u>Thuja</u> occidentalis	Eastern White "Cedar"
" plicata	Red "Cedar", B.C. Coast "Cedar"
" " pendula	Weeping Arbor-vitae
<u>Tsuga</u> canadensis	Canadian Hemlock

DWARF AND SEMI-DWARF CONIFEROUS EVERGREENS

The following are well suited to specimen planting in rockeries, in foundation plantings, and for foreground grouping in borders and along walkways. Though all are slow-growing (and consequently fairly expensive), there is considerable variation in their ultimate size. Some should be restricted to planting in wide borders, or on large

rockeries, unless the gardener is prepared to relocate or cut down the specimens after a lapse of twenty years or so.

Upright or Pyramidal:

<u>Chamaecyparis</u>	Lawsoniana and vars.	Lawson's Cypress
"	obtusa gracilis	Hinoki Cypress
"	pisifera filifera	Thread Cypress
"	pisifera plumosa and vars.	Plume Cypress
"	pisifera squarrosa and vars.	Moss Retinosporas
<u>Cupressus</u>	nootkatensis compacta	Dwarf Nootka Cypress
<u>Juniperus</u>	communis suecica	Swedish Juniper
"	excelsa stricta	Spiny Greek Juniper
"	scopulorum Moonlight	Moonlight Juniper
"	virginiana	Western Mt. Juniper
"	virginiana Grey Owl	Grey Owl Juniper
<u>Picea</u>	Abies varieties	dwf. and semi-dwarf Spruces
<u>Pinus</u>	Mugo Pumilio	Dwarf Swiss Mt. Pine
<u>Taxus</u>	cuspidata nana	Dwarf Japanese Yew
<u>Thuja</u>	occidentalis filiformis	Thread Arbor-vitae
"	occidentalis columnaris	Columnar Arbor-vitae
"	occidentalis globosa	Globe Arbor-vitae
"	orientalis elegantissima	Golden Oriental Arbor-vitae

Very Dwarf Forms:

<u>Chamaecyparis</u>	obtusa gracilis nana	Dwarf Hinoki Cypress
"	Lawsoniana Ellwoodii	Ellwood's Cypress (tender)
"	Laws. Forsteckensis	Birdsnest Cypress
"	Laws. minima glauca	Dwf. Lawson's Cypress
"	obtusa ericoides	Dwf. Moss Retinospora
"	pisifera filifera nana	Dwf. Thread Cypress
<u>Juniperus</u>	communis compressa	Dwf. Needle or Spire J. (tender)
"	hibernica	Irish Juniper (tender)
"	communis suecica	Swedish J. (can be trimmed)
"	excelsa stricta	Spiny Greek Juniper
<u>Picea</u>	Abies varieties	Dwarf spruces
<u>Pinus</u>	Mugo Mughus	Prostrate Mugo Pine
"	mugo compacta	Mugo Pine
<u>Taxus</u>	cuspidata nana	Dwf. Japanese Yew
"	media Hicksii	Hick's Yew
<u>Thuja</u>	occidentalis globosa nana	Dwf. globe arbor-vitae
"	occidentalis pumila Little Gem	Little Gem arbor-vitae
"	orientalis Berkmannii	Biota Berkmannii

Semi-prostrate and Fan Shapes:

Juniperus chinensis Pfitzeriana, in many forms--the Pfitzers Juniper, is the best of the fan types. Several colours, including green, blue, and golden forms are available. Fast growing, robust and free from disease and insects, they reach a span of 10-12 feet, and usually a height of 3 to 4 ft.

<u>Juniperus</u> chinensis plumosa	vase shape
" " plumosa aurea	vase shape
" " japonica	vase shape
" " mascula	vase shape
" Sabina	semi-prostrate
" " tamariscifolia	almost prostrate
" squamata Meyerii	irregular upright vase
" chinensis blauwii	upright vase shape

Prostrate or Creeping Forms:

<u>Juniperus</u> communis depressa	Common Prostrate Juniper
" horizontalis (several varieties including Waukegan, Bar Harbor, Andorra Juniper, and procumbens)	Creeping Juniper
<u>Juniperus</u> scopulorum prostrata	Windermere Juniper
" squamata prostrata	Prickly Blue Mt. Juniper

BROAD-LEAFED EVERGREENS

The following list is composed of broad-leaved evergreens that are reasonably reliable in the Okanagan. Such factors as snow cover, early and thorough ripening of wood, adequate soil moisture at time of freeze-up, and in particular, protection from biting winds and the winter sun, are extremely important for the survival of these shrubs.

Latin Name: Genus, Species,
and Variety

Common Name

<u>Arctostaphylos</u> Uva-ursi	Kinnikinnick
<u>Berberis</u> candidula	Pale-leaf Barberry
" Chenaultii	Chenault's Barberry
" Julianae	Wintergreen Barberry
<u>Buxus</u> microphylla var. Koreana	Korean Box
" sempervirens	Common Box

Latin Name: Genus, Species,
and Variety

Common Name

Cotoneaster Dammeri (humifusa)
" adpressa praecox

Creeping Cotoneaster

Cytisus hirsutus
" praecox
" purgans

Hairy Broom
Warminster Broom
Provence Broom

Daphne cneorum

Garland Flower

Euonymus Fortunei (E. radicans acutus)
" " var. Carricerei
" " " coloratus
" " Emerald Charm
" " Emerald Cushion
" " Emerald Leader
" " Emerald Pride
" " gracilis
" " minimus
" " reticulatus
" " Silver Gem
" " vegetus
" radicans (see E. Fortunei)
" repens (see E. Fortunei)

Little-leaf Wintercreeper
Big-leaf Wintercreeper
Purple-leaf Wintercreeper
Emerald Charm Wintercreeper
Emerald Cushion Winter-
creeper
Upright Wintercreeper
Bush Wintercreeper

Silver-leafed Wintercreeper
Big-leaf Wintercreeper

Genista pilosa

Hairy Broom

Hedera helix baltica
" " Caenwoodiana
" " conglomerata
" " hibernica
" " peltata

English ivy
Caenwoods ivy
Shrub ivy

Cut-leafed ivy

Ilex crenata
" " hetzii
" " convexa
" " rotundifolia
" Fortunei (see I. crenata)
" fujisanensis (see I. pedunculosa)
" pedunculosa
" glabra

Japanese Holly
Large-leafed Jap. Holly
Box-leaf Jap. Holly
Round-leaf Jap. Holly

Stem-fruited Holly
Inkberry, Winterberry

Lavandula officinalis

Lavender

Lonicera Henryi
" japonica var. Halliana

Henry's Honeysuckle
Hall's Honeysuckle

Mahonia aquifolium
" repens

Bush Holly-Grape
Creeping Holly-Grape

Pachystima myrsinites
" Canbyi

Myrtle-leaf Box

Rosmarinus officinalis prostratus

Creeping Rosemary

Teucrium chamaedrys

Germander

Yucca filamentosa
" glauca

Adam's needle

BEST LARGE SHADE TREES

<u>Latin Name</u>	<u>Common Name</u>	<u>Type of Shade</u>
<u>Acer</u> pseudoplatanus	Sycamore Maple	dense
" platanoides var. Schwedleri	Schwedleri's Maple	dense
" " var. Drummondii	Drummond's Maple	dense
" " var. Crimson King	Crimson King Maple	dense
" saccharinum	Silver Maple	dappled
" " var. Weiri	Weeping Silver Maple	dappled
" rubrum	Red Maple	dense
<u>Aesculus</u> sp.	Horse chestnuts	dense
<u>Amelanchier</u> laevis	Saskatoon	open shade
<u>Betula</u> pendula	European White Birch	open
" papyrifera	Paper Birch	open
" pendula var. dalecarlica	Cut-leafed weeping Birch	open
" pendula var. Youngi	Young's weeping Birch	open
<u>Catalpa</u> speciosa	Western Catalpa	dappled
<u>Cladrastis</u> lutea	Yellow-wood	dappled
<u>Fagus</u> grandifolia	American Beech	dappled to dense
<u>Fraxinus</u> excelsior	European Ash	dappled
<u>Gleditsia</u> triacanthos	Locust	dappled
<u>Platanus</u> occidentalis	Buttonwood	dappled
<u>Populus</u> tremuloides	Quaking Aspen	dappled
<u>Quercus</u> borealis	Northern Red Oak	dappled
palustris	Pin Oak	open
<u>Robinia</u> pseudo-Acacia	Black Locust	open
<u>Tilia</u> cordata	European Little-leaf Linden	dense
<u>Ulmus</u> Americana	American Elm	dappled

BEST SMALL SHADE TREES

<u>Latin Name</u>	<u>Common Name</u>	<u>Type of Shade</u>
<u>Aesculus</u> hybrida Lyonii	Horsechestnut	dense
<u>Alnus</u> sp.	Alders	dappled
<u>Amelanchier</u> grandiflora		dappled
<u>Betula</u> pendula purpurea	Purple weeping birch	open
<u>Caragana</u> arborescens	Pea tree	open

<u>Latin Name</u>	<u>Common Name</u>	<u>Type of Shade</u>
<u>Cercis canadensis</u>	Redbud	open
<u>Corylus Avellana grandis</u>	Cobnut	dappled
<u>Crataegomespilus grandiflora</u>	Haw-Medlar	open
<u>Crataegus oxyacantha</u>	P.S. Hawthorn	dappled
Pauls Scarlet		
" Mordenensis Toba	Toba Hawthorn	dappled
<u>Eleagnus augustifolia</u>	Russian Olive	open
<u>Ginkgo biloba</u>	Maidenhair Tree	dappled
<u>Gleditsia triacanthos</u> Morraine	Morraine Locust	dappled
" " Shademaster	Shademaster L.	dappled
<u>Malus micromalus</u>	Midget Crab	dappled
" Makamik		dappled
" moerlandi Profusion		dappled
" Van Eseltine		"
" Charlottae		"
<u>Morus alba var. tatarica</u>	Russian Mulberry	"
<u>Ostrya virginianum</u>	Hop Hornbeam	dense
<u>Prunus virginiana</u> Schubert	Chokecherry	dappled
" cerasifera var. Bliriana	Japanese apricot	dappled
" Simonii	Apricot plum	dappled
<u>Salix discolor</u>	Pussy Willow	dappled
" Caprea	Goat Willow	dappled
<u>Sorbus sp.</u>	Mt. Ash or Rowan	dappled
<u>Tilia euchlora</u>	Crimean Linden	dappled
<u>Ulmus pumila</u>	Siberian or Dwarf	
	Elm	open
" parvifolia	Chinese Elm	open

FAST-GROWING TREES FOR QUICK SHADE

It should be remembered that, in many cases, trees which develop quickly may be short-lived, or may soon become too large for a small property. (The latter are marked *.) In either case, their ultimate removal and replacement becomes a necessity.

<u>Latin Name</u>	<u>Common Name</u>
* <u>Acer saccharinum</u>	Silver Maple
* " saccharinum Wieri	Wier's Cut-leaf Maple
<u>Ailanthus altissima</u>	Tree of Heaven

<u>Latin Name</u>	<u>Common Name</u>
<u>Corylus</u> Columna	Turkish Hazel
<u>Gleditsia</u> sp.	Locusts
* <u>Platanus</u> occidentalis	Plane, Buttonwood
* <u>Populus</u> sp.	Poplars, Aspens, Cottonwoods
<u>Robinia</u> pseudo-acacia	Black Locust
<u>Salix</u> alba vitellina	Upright Golden Willow
" alba chermesina	Red Willow
" Caprea	Goat Willow
<u>Sorbus</u> Aucuparia	Mt. Ash, Rowan
* <u>Ulmus</u> Americana	American Elm
" pumila	Siberian Elm
" parvifolia	Chinese Elm

FLOWERING TREES

Early Spring:

<u>Salix</u> Caprea	Goat Willow
" discolor	Pussy Willow
<u>Prunus</u> davidiana	Early Flowering "Almond"
<u>Malus</u> baccata Mandshurica	White Manchurian Crab
" sp.	Crabapples
<u>Prunus</u> tomentosa	Nanking Cherry

Large Trees:

<u>Aesculus</u> carnea	Red Horse-chestnut
" glabra	Ohio Buckeye
<u>Amelanchier</u> laevis	Shad
<u>Catalpa</u> speciosa	Western Catalpa
<u>Cladrastis</u> lutea	Yellow-wood
<u>Koelreuteria</u> paniculata	Golden Rain
<u>Prunus</u> Maackii	Amur Cherry
<u>Robinia</u> pseudo-acacia Idaho	Idaho Locust
<u>Gleditsia</u> triacanthos	Sweet Locust

Medium-sized Trees:

<u>Malus</u> species and varieties	Flowering Crabapples
<u>Prunus</u> Bliriana	Japanese Flowering Apricot
<u>Sorbus</u> Aucuparia	European Mt. Ash
<u>Crataegus</u> oxyacantha Paulii	Pauls Scarlet Hawthorn
<u>Amelanchier</u> grandiflora	Hybrid Saskatoon
<u>Salix</u> Caprea	Goat Willow
<u>Prunus</u> Persica	Flowering Peach
" Amygdalus Pollardii	Pollard's Almond

Small Flowering Trees:

<u>Cornus</u> florida	White Florida Dogwood
<u>Laburnum</u> Vossii	Golden Chain
<u>Cercis</u> canadensis	Redbud
<u>Robinia</u> hispida	Rose Acacia
<u>Prunus</u> tomentosa	Nanking Cherry
" virginiana Schubert	Schubert's Choke-cherry

TREES FOR AVENUE PLANTING

In all cases, care should be taken to avoid planting under power lines.

<u>Latin Name</u>	<u>Common Name</u>
<u>Ulmus</u> pumila	Siberian Elm
<u>Platanus</u> occidentalis (ample space and moisture)	Buttonwood (Western Plane Tree)
<u>Populus</u> Simonii fastigiata	Simons poplar
<u>Sorbus</u> aucuparia	American Mt. Ash
<u>Eleagnus</u> augustifolia	Russian Olive
<u>Aesculus</u> cornea	Red Horse-Chestnut
" hybrida Lyonii	Lyon's Horse-chestnut
" glabra	Ohio Buckeye
<u>Betula</u> pendula var. Youngii	Young's Weeping Birch
<u>Crataegus</u> oxyacantha	Paul's Scarlet
" Mordenensis Toba	Toba Hawthorne
<u>Laburnum</u> Wateri	Golden Chain

<u>Latin Name</u>	<u>Common Name</u>
<u>Malus</u> micromalus (high graft)	Midget Crab
" baccata columnaris.	Columnar Crab
" Makamik	Makamik Crab
" moerlandsii Profusion	Profusion Crab
" Dorothea	Dorothea Crab
" Van Eseltine	Van Eseltine Crab
<u>Morus</u> alba var. tatarica	Russian Mulberry
<u>Ostrya</u> virginiana	American Hornbeam
<u>Tilia</u> euchlora	Crimean Linden

TREES FOR FORMAL USE

<u>Latin Name</u>	<u>Common Name</u>
1. <u>Globular</u>	
<u>Fraxinus</u> excelsior (high graft)	Globe Ash
<u>Robinia</u> pseudo-acacia umbraculifera	Globe Acacia
<u>Ulmus</u> carpinifolia umbraculifera	Globe Elm
2. <u>Round Headed:</u>	
<u>Acer</u> saccharum	Sugar Maple
<u>Aesculus</u> sp.	Horse-chestnut
<u>Morus</u> alba tatarica	Russian Mulberry
<u>Salix</u> pentandra	Laurel Willow
3. <u>Broad Pyramidal Headed:</u>	
<u>Acer</u> pseudoplatanus	Sycamore Maple
" platanoides vars.	Norway Maple
<u>Catalpa</u> species	Indian Bean
<u>Tilia</u> cordata	European Little-leaf Linden
4. <u>Compact Pyramidal Headed:</u>	
<u>Platanus</u> occidentalis	Buttonwood
<u>Tilia</u> euchlora	Crimean Linden

<u>Latin Name</u>	<u>Common Name</u>
5. <u>Narrow Pyramidal Headed:</u>	
<u>Populus canadensis</u> Eugenii	Eugenie Poplar
6. <u>Columnar:</u>	
<u>Acer platanoides</u> columnare	Columnar Maple
<u>Malus baccata</u> columnaris	Columnar Crab
<u>Populus nigra</u> Italica	Lombardy Poplar (large)
" Simonii fastigiata	Simon's Poplar
<u>Robinia pseudo-acacia</u> pyramidalis	Columnar Locust
<u>Quercus robur</u> fastigiata	Columnar English Oak

TREES FOR AUTUMN FOLIAGE COLOUR

<u>Latin Name</u>	<u>Common Name</u>
<u>Acer</u> Ginnala	Amur Maple
" palmatum	Japanese Maple
" rubrum	Red Maple
<u>Amelanchier</u> sp	Saskatoons
<u>Betula</u> sp	Birches
<u>Cornus</u> Florida	Florida Dogwood
<u>Euonymus</u> europaeus	Spindle Tree
" atropurpureus	Wahoo
<u>Ginkgo</u> Biloba	Maidenhair Tree
<u>Malus</u> Dolgo	Dolgo Crab
" baccata columnaris	Columnar Crab
" Prince Georges	Prince George Crab
<u>Populus</u> sp	Poplars, Aspens
<u>Quercus</u> borealis	Red Oak
<u>Rhus</u> sp	Sumacs
<u>Sorbus</u> sp	Mountain Ashes

TREES FOR LARGE ROCKERIES

<u>Latin Name</u>	<u>Common Name</u>
<u>Acer</u> palmatum	Japanese Maple
" Ginnala	Amur Maple
<u>Cornus</u> Florida	Florida Dogwood
<u>Cercis</u> Canadensis	Redbud
<u>Corylus</u> sp.	Hazels, Filberts
<u>Crataegus</u> sp. (cut low)	Hawthornes
<u>Euonymus</u> europaeus	Spindle Tree
" atropurpureus	Wahoo
<u>Laburnum</u> Wateri	Golden Chain
<u>Malus</u> floribunda	Japanese Crab
" micromalus (cut low)	Midget Crab
" schiedeckeri	Schiedecker's Crab
" Dorothea (cut low)	Dorothea Crab
" Prince Georges	Prince Georges Crab
<u>Prunus</u> virginiana	Chokecherry
" tomentosa	Nanking Cherry
" cerasifera atropurpurea	Purple-leafed or Pissardi plum
" cerasifera Bliriana	Japanese apricot
" persica	Double flowering peach
<u>Rhus</u> sp.	Sumacs
<u>Robinia</u> hispida	Rose acacia
<u>Salix</u> discolor	Pussy Willow
" Caprea	Goat Willow
<u>Sorbus</u> sp.	Mt. Ashes
<u>Ulmus</u> glabra Camperdownii	Camperdown Elm

TREES OF WEEPING OR PENDULOUS HABIT

<u>Latin Name</u>	<u>Common Name</u>
<u>Betula</u> pendula	European White Birch
" pendula dalecarlica	Cut-leaf Weeping Birch
" pendula purpurea	Purple Weeping Birch
<u>Caragana</u> arborescens pendula	Weeping Caragana
<u>Fagus</u> sylvatica purpurea pendula	Purple Weeping Beech
<u>Salix</u> babylonica	Weeping Willow
" blanda	Wisconsin Weeping Willow
" sepulcralis	Solomon's Weeping Willow
" babylonica aurea	Golden Weeping Willow
" alba tristis	Golden Weeping Willow
" hybrida Niobe	Niobe Weeping Willow

<u>Latin Name</u>	<u>Common Name</u>
* <u>Malus</u> Red Jade	Red Jade Crab
* " Thiel	Thiel Crab
* " Echtermeyer	Echtermeyer Crab
<u>Ulmus glabra</u> var. <u>Camperdownii</u>	Camperdown Elm
* <u>Prunus</u> <u>Persica pendula</u>	Weeping Flowering Peach

It should be noted that certain of the above species (marked *) develop into very small ornamental "weeping standards". They are usually grafted onto the top of a straight trunk or stem, and the branches weep to the ground. As such, they are "horticultural oddities" rather than trees as such, and should be treated as such (i.e., used sparingly).

TREES FOR MOIST LOCATIONS

<u>Latin Name</u>	<u>Common Name</u>
<u>Acer rubrum</u>	Red Maple
<u>Alnus tenuifolia</u>	Mountain Alder
" <u>rubra</u>	Red Alder
<u>Corylus</u> sp.	Filberts, Hazelnuts
<u>Betula</u> sp.	Birches
<u>Fraxinus</u> sp.	Ashes
<u>Platanus</u> sp.	Plane Trees
<u>Populus</u> sp.	Poplars, Aspens, Cottonwoods
<u>Salix</u> sp.	Willows
<u>Tilia</u> sp.	Lindens
<u>Ulmus americana</u>	American Elm

TREES FOR WET LOCATIONS

<u>Alnus tenuifolia</u>	Mountain Alder
<u>Betula papyrifera</u>	Canoe or Paper Birch
" <u>occidentalis</u>	Water Birch (shrubby)
<u>Populus tremuloides</u>	Trembling Aspen
" <u>trichocarpa</u>	Northern Black Cottonwood
<u>Salix lasiandra</u>	Pacific Willow
" <u>amygdaloides</u>	Peachleaf Willow
" <u>babylonica</u>	Weeping Willow
<u>Acer pennsylvanicum</u>	Striped Maple

DROUGHT-RESISTANT TREES

<u>Latin Name</u>	<u>Common Name</u>
<u>Eleagnus</u> augustifolia	Russian Olive (20-30 ft.)
<u>Amelanchier</u> sp.	Saskatoons
<u>Caragana</u> arborescens	Siberian Pea Shrub
<u>Morus</u> alba tatarica	Russian Mulberry
<u>Rhus</u> typhina	Staghorn Sumac
<u>Salix</u> discolor	Pussy Willow (20 ft.)
<u>Sorbus</u> scopulina	Rocky Mt. Ash
<u>Ulmus</u> pumila	Dwarf or Siberian Elm (15-20 ft.)
" parvifolia	Chinese Elm (20-30 ft.)
<u>Gleditsia</u> triacanthos	Sweet Locust
<u>Robinia</u> pseudo-Acacia	Black Locust
<u>Corylus</u> Columna	Turkish Hazel

TREES AND SHRUBS FOR EFFECTIVE FRUITS, NUTS OR SEED PODS

Large Trees

<u>Aesculus</u> glabra	Ohio Buckeye
<u>Gymnocladus</u> dioica	Kentucky Coffee Tree
<u>Robinia</u> pseudo-acacia	Black Locust
<u>Platanus</u> occidentalis	Buttonwood
<u>Carya</u> sp.	Hickories
<u>Amelanchier</u> laevis	Shad

Medium Trees

<u>Malus</u> Dolgo	Dolgo Crab
" Makamik	Makamik Crab
<u>Euonymus</u> Europaeus	Spindle Tree
<u>Cornus</u> Florida	Florida Dogwood
<u>Prunus</u> Persica	Flowering peaches
" Amygdalus Pollardii	Pollard's Almond
<u>Sorbus</u> sp.	Mt. Ashes
<u>Amelanchier</u> grandiflora	Hybrid Saskatoon

TREES AND SHRUBS FOR EFFECTIVE FRUITS, NUTS OR SEED PODS (Cont'd)

<u>Latin Name</u>	<u>Common Name</u>
<u>Small Trees or Large Shrubs:</u>	
<u>Prunus virginiana</u> Schubert	Hybrid Choke-cherry
" tomentosa	Nanking Cherry
<u>Amelanchier</u> sp.	Saskatoons
<u>Eionymus atropurpureus</u>	Wahoo, Burning Bush
<u>Malus floribunda</u>	Japanese flowering Crab
<u>Lonicera maackii</u>	Amur honeysuckle
" tatarica	Tatarian honeysuckle
<u>Sambucus</u> sp.	Elderberries
<u>Rosa</u> sp.	Shrub roses
<u>Rhamnus Frangula</u>	Alder Buckthorn

Medium to Small Shrubs

<u>Cotoneaster</u> sp.	Cotoneasters
<u>Berberis</u> sp.	Barberries
<u>Viburnum</u> sp.	Viburnums
<u>Symphoricarpos</u> sp.	Coralberries, Snowberries
<u>Ligustrum</u> sp.	Privets
<u>Daphne</u> sp.	Daphnes
<u>Chaenomeles</u>	Quinces
<u>Mahonia</u> sp.	Oregon or Holly Grapes
<u>Ribes alpinum</u>	Mountain currant

DECIDUOUS FLOWERING SHRUBS BY SEASON

March - April

<u>Daphne Mezereum</u>	February Daphne
<u>Forsythias</u>	Forsythias
<u>Chaenomeles</u>	Quince
<u>Prunus tomentosa</u>	Nanking Cherry
" Blireana	Japanese "Apricot"
" triloba	Bush Apricot
" glandulosa	Japanese Flowering "Almond "
<u>Magnolia Soulangeana</u>	Saucer Magnolia

DECIDUOUS FLOWERING SHRUBS BY SEASON (Cont'd)

Latin Name

Common Name

March - April

Mahonia repens
aquifolium

Creeping Oregon Grape
Tall Oregon Grape

Amelanchier sp.

Saskatoons

May

Most Malus sp.

Crabapples

Prunus Persica sp.

Flowering Peaches

Cornus Florida

Florida Dogwood

Syringa sp.

Species Lilacs

Exochordas

Pearl Bushes

Crataegus sp.

Hawthorns

Laburnum sp.

Laburnums

Rosa sp.

Species and shrub roses

Spiraea prunifolia plena

Bridal Wreath

Viburnum sp.

Viburnums

June

Rosa hybrida

Teas, Floribundas, grandifloras

Buddleia alternifolia

Butterfly Bush

Deutzia sp.

Deutzias

Helianthemums

Sun Roses

Kolkwitzia amabilis

Beauty Bush

Syringa hybrida

Hybrid Lilacs

Lonicera sp.

Honeysuckles

Potentilla fruticosa hyb.

Bush cinquefoil

Philadelphus sp.

Mock-oranges

Robinia sp.

False acacias

Weigela sp.

Weigelas

Spiraea sp.

Spiraeas

DECIDUOUS FLOWERING SHRUBS BY SEASON (Cont'd)

Latin Name

Common Name

July - August

<u>Buddleia</u> hybrida	Hybrid Butterfly-Bushes
<u>Caryopteris</u> sp.	Bluebeard
<u>Cotinus</u> Coggygria	Smoke-Bush
<u>Hydrangea</u> sp.	Hydrangeas
<u>Hypericum</u> sp.	St. John's Worts
<u>Lavandula</u> sp.	Lavenders
<u>Potentilla</u> fruticosa var.	Potentillas
<u>Spiraea</u> sp.	Spiraeas
<u>Yucca</u> sp.	Adam's Needle
<u>Tamarix</u> sp.	Tamarix

ROSES

Roses, like any other genus, can and often do become an obsession with gardeners, in which case they are specialized almost to the exclusion of everything else in the garden. However, they do not require such specialized attention that the average gardener cannot grow them with great satisfaction. Furthermore, the genus is so variable and recent introductions have so extended the flowering season, that roses now fit gracefully and obligingly into almost any landscape theme, from semi-natural through informal to the most geometrically formal type of landscape plan.

Species Roses

A very wide range of "wild" or species roses, and species crosses, are well adapted to shrubbery and large rockery plantings. Many of these are characterized by extraordinary beauty of flower, while others are spectacular for graceful habit, foliage contrast, or the beauty of the fruits which often persist throughout the winter. Some of the best are:

Rosa canina (Dog Rose) - to 10 ft.: single white flowers followed by large vase-shaped fruits.

Rosa rugosa - to 6 ft.: Red or white solitary flowers.

Rugosa hybrids - varying from 4-6 ft., including some of our most spectacular shrub roses. F.J. Grootendorst, Grootendorst Supreme, Pink Grootendorst, Dr. Eckner, Enchantress and Hansa, are among the best.

Rosa Moyesii - to 10 ft.: Deep red single flowers, solitary. Dark orange fruits to 2 in. long.

Moyesii hybrids - Eddies Crimson - 9-10 ft., with blood red single flowers 4 in. or more across, followed by large persistent fruits.

Rosa Hugonis - to 8 ft. Masses of single yellow flowers followed by scarlet fruits.

Rosa Harrisonii: (*R. foetida* x *R. spinosissima*) (Harrison's yellow) - to 6 ft. Very early, fragrant pale yellow semi-double.

Shrub Roses

These, like some of the foregoing, are species hybrids, but bear so little resemblance to either parent that they are not directly associated as "species crosses".

Betty Bland, Commandant Beaurepaire, Gruss an Teplitz (H. China), Prestige, Scharlachglut, Sparrieshoop (sweet briar), Sea Foam, Therese Bugnet, von Scharnhorst, York and Lancaster are a few.

Climbing Roses

Climbing Hybrid Tea roses are not reliably hardy in the Okanagan, unless tied down and protected over winter.

Recommended varieties of Hardy Climbers are Blaze (ever-blooming bright red), Coral Dawn (coral), Dream Girl (coral pink), New Dawn (flesh pink), and Cecile Brunner (flesh pink climbing Polyantha).

All require much lighter pruning than a Hybrid Tea would receive, and then only occasionally.

Bush Roses

Generally again, Hybrid Teas have proved less hardy than Grandifloras, Floribundas and Polyanthas. However, they can be grown if extra precautions are taken to protect them over winter.

Several years of testing have indicated that in the Okanagan area, Grandiflora and Floribunda roses are most practical for garden plantings. Advantages which are characteristic of these types are reasonable hardiness, versatility in size and shape of the plants depending on pruning practices, an abundance of flowers which are produced almost continuously from June to October, and clusters of flowers which are well adapted to cutting for indoor enjoyment. Both types lend themselves to interspersed planting throughout shrubbery or flower borders, to mass plantings in larger gardens, to formal use in rose beds, or to informal hedge rows.

Of many Grandiflora varieties tested, "Vogue" and "Pink Parfait" received highest rating with "Forty-niner", "Golden Girl", "Queen Elizabeth" and "John S. Armstrong" also warranting recommendation.

Of the Floribundas, "Golden Slippers", "Pink Pinocchio", "Jiminy Cricket", "Sarabande", "Frensham", "Fanal" and "Hollanderin" have been rated consistently highly.

"Tropicana", "Charlotte Armstrong", "Mister Lincoln" and "Chicago Peace" have appeared to be the most reliable of the Hybrid Teas under Summerland conditions.

Winter Protection: (see also Chapter VIII)

Hybrid Teas, either as climbers or bush types, are less reliable than Hardy Climbers, and bush Grandifloras, Floribundas, and Polyanthas. Hardiness can be improved somewhat by planting roses which have been budded onto Canira rootstocks, though such plants may be slightly more expensive and are reputed to be somewhat slow in be-

coming established.

All roses must be ripened off well before winter, and bushes and climbers (not "shrub" and "species") should be mounded with soil in late November, to a height of 8-12 in. up the stems. This mound in turn should be covered with sand and peat or soil and peat, or rotted manure to protect the roots in case of a severe winter without snow cover. This protection should be removed in early March, before growth starts. Pruning should be delayed until April 15, when greatest danger of spring frosts is past.

HEDGE PLANTS

Low Formal Hedges:

<u>Berberis thunbergi</u> minor	Box Barberry
" " atropurpurea	Purple-leaf Barberry
<u>Buxus microphylla</u> japonica	Japanese Box
<u>Crataegus oxyacantha</u>	English Hawthorn

Tall Formal or Clipped Hedges:

<u>Ulmus pumila</u>	Siberian Elm (very rapid)
<u>Ligustrum vulgare</u>	Common Privet
" amurense	Amur Privet
" ibolium	Ibolium Privet
<u>Rhamnus</u> sp.	Buckthorns
<u>Caragana arborescens</u>	Caragana

Low Informal Hedges:

<u>Berberis thunbergi</u>	Thunberg Barberry
" " atropurpurea	Japanese purple-leafed Barberry
<u>Deutzia gracilis</u>	Slender Deutzia
<u>Viburnum opulus nanum</u>	Dwarf Viburnum
<u>Spiraea bumalda</u> Anthony Waterer	Anthony Waterer Spiraea
" Callosa	Japanese Spiraea

Tall Informal Hedges:

<u>Caragana</u> arborescens	Caragana
<u>Cotoneaster</u> acutifolia	Peking cotoneaster
<u>Chaenomeles</u>	Quince
<u>Deutzia</u> Lemoinei	Lemoine Deutzia
<u>Philadelphus</u> Pentagon	Pentagon Mock-Orange
<u>Rosa</u> rugosa	Rugosa rose 6 ft.
" canina	Dog rose 10 ft.
" rubrifolia	Purple-leafed rose 6 ft.
" spinosissima	Scotch rose 4 ft.
<u>Spiraea</u> vanhouttei	Vanhouttei Spiraea
" prunifolia	Bridal-wreath

Evergreen Hedges:

<u>Thuja</u> occidentalis columnaris	Columnar "Cedar"
" orientalis	Biota
<u>Tsuga</u> canadensis	Hemlock
<u>Pseudotsuga</u> taxifolia	Douglas Fir

VINES FOR COVERING BANKS, WALLS AND FENCES

<u>Aristolochia</u> siphon	Dutchman's Pipe
<u>Campsis</u> radicans	Trumpet Vine
<u>Celastrus</u> arbutifolia	Japanese Bittersweet
" scandens	American Bittersweet
<u>Clematis</u> Jackmannii types)	
" Viticella types)	
" Patens types)	Large flowered clematis hybrids
" Florida types)	
" Lanuginosa types)	
" paniculata	Sweet Autumn Clematis
" Tangutica	Golden or Chinese Clematis
" virginiana	Eastern Virgins Bower
" serratifolia	Korean Clematis
<u>Euonymus</u> Fortunei	Climbing Euonymus
<u>Hedera</u> helix baltica	Baltic Ivy
<u>Lonicera</u> sempervirens	Scarlet Trumpet Honeysuckle
<u>Lycium</u> chinense	Chinese Matrimony Vine
<u>Parthenocissus</u> quinquefolia	Virginia Creeper
" radicansissima	Swedish Virginia Creeper
" tricuspidata	Boston Ivy

VINES FOR COVERING BANKS, WALLS AND FENCES (Cont'd)

<u>Polygonum</u> Aubertii	Fleece Vine
<u>Rosa</u> , climbing and rambling types	Roses
<u>Vitis</u> vulpina	River Bank Grape
<u>Wisteria</u> senensis	Chinese Wisteria
" floribunda	Japanese Wisteria

GROUND COVERS

* <u>Aegopodium</u> podagraria	Goutweed
* <u>Ajuga</u> reptans	Bugle Weed
<u>Arctostaphylos</u> Uva-ursi	Bearberry
* <u>Campanula</u> carpatica	Campanula (trailing forms)
<u>Celastrus</u> sp.	Bittersweets
<u>Clematis</u> columbiana	Western Virgins Bower
" virginiana	Eastern Virgins Bower
" ligusticifolia	Travellers Joy
" tangutica	Chinese or Golden Clematis
<u>Cotoneaster</u> Dammeri	Prostrate Cotoneaster
" adpressa praecox	Creeping Cotoneaster
<u>Euonymus</u> Fortunei coloratus	Purple Leaf Winter Creeper
" " vegetus	Big-leaf Winter Creeper
" radicans vars.	Little-leaf Winter Creepers
<u>Hedera</u> helix baltica	Baltic Ivy
<u>Hypericum</u> Buckleii	St. Johns Wort
* <u>Iberis</u> sempervirens	Perennial Candytuft
<u>Juniperus</u> Chinensis Pfitzeriana	Pfitzers Juniper (various)
" communis depressa	Common Prostrate Juniper
" horizontalis	Creeping Juniper
" " Douglasii	Waukegan Juniper
" " glauca	Bar Harbor Juniper
" " plumosa	Andorra Juniper
" " procumbens	Needleless Mat Juniper
" procumbens	Prostrate Juniper
" Sabina	Savins Juniper
" " tamariscifolia	Larch-leaved Juniper
" scopulorum prostrata	Blue Windermere Juniper
" squamata prostrata	Prickly Blue Mat Juniper
<u>Lonicera</u> sempervirens	Scarlet Trumpet Honeysuckle
<u>Mahonia</u> sp.	Oregon Grapes
* <u>Nepeta</u> Mussini	Catmist
<u>Pachysandra</u> terminalis	Japanese Spurge
<u>Parthenocissus</u> quinquefolia	Virginia Creeper
" tricuspidata	Boston Ivy

GROUND COVERS (Cont'd)

* <u>Phlox</u> subulata	Alpine Phlox
<u>Polygonum</u> Aubertii	Fleece Vine
" Reynoutria	Dwarf Fleece Vine
* <u>Saponaria</u> caespitosa	Soapwort
* <u>Sedum</u>	Stonecrops
<u>Teucrium</u> Chamaedrys	Germander
* <u>Thymus</u> sp.	Thymes
* <u>Vinca</u> minor	Periwinkle
* <u>Veronica</u> sp.	Veronicas (trailing forms)

* indicates Herbaceous species

HERBACEOUS PLANTS FOR ROCKERIES

<u>Genus and Species</u>	<u>Colour</u>	<u>Height in Inches</u>
<u>Thriving in Full Sun</u>		
<u>Acanea</u> microphylla	rose	trailing
<u>Achillea</u> tomentosa	yellow	6
<u>Alyssum</u> saxatile	gold, lemon	6-9
<u>Androsace</u> carnea	rose	4
" lanuginosa	rose	6
" sarmentosa	rose and white	6
<u>Anemone</u> Pulsatilla	mauve, white, red	12
<u>Anthemis</u> cinerea	white	
" montana	white	12
<u>Aquilegia</u> alpina	blue	9
" glandulosa	blue and white	12
<u>Arabis</u> alpina	white	12
" aubrietioides	mauve	4
<u>Arenaria</u> balearica	white	3
<u>Armeria</u> alpina	purple	6
<u>Arnica</u> montana	yellow	12
<u>Aster</u> alpinus	mauve	6
" Frikarti	mauve	12
" hybrida (Michaelmas)	various	8-24
<u>Aubrietia</u> vars.	various	4-6
<u>Campanula</u> Allionii	pale purple	3
" carpatica	violet	12

HERBACEOUS PLANTS FOR ROCKERIES (Cont'd)

<u>Genus and Species</u>	<u>Colour</u>	<u>Height in Inches</u>
<u>Campanula</u> <i>cenisia</i>	blue	6
" <i>muralis</i>	purple	6
" <i>pusilla</i>	pale blue	3
" <i>turbinata</i>	violet	6
" <i>Waldsteiniana</i>	pale blue	3
<u>Cyclamen</u> <i>europaeum</i>	purple and white	3
" <i>neapolitanum</i>	purple, rose, white	3
<u>Dianthus</u> <i>alpinus</i>	rosy purple	3
" <i>arenarius</i>	pale mauve	6
" <i>caesius</i>	pink	6
" <i>deltoides</i>	rose	6
" <i>glacialis</i>	rosy purple	3
" <i>graniticus</i>	red	6
" <i>neglectus</i>	red	3
" <i>superbus</i>	pale purple	12
<u>Dryas</u> <i>octopetala</i>	white	6
<u>Gentiana</u> <i>acaulis</i>	deep blue	4
" <i>Freyniana</i>	bright blue	4
" <i>Przewalskii</i>	bright blue	12
" <i>verna</i>	bright blue	2
<u>Geranium</u> <i>argenteum</i>	purple	6
" <i>sanguineum</i>	purplish red	6
<u>Gypsophila</u> <i>repens</i>	white	trailing
<u>Helianthemum</u> <i>in variety</i>	varied	10-12 tr.
<u>Heuchera</u> <i>sanguinea</i>	coral red	12-18
<u>Iberis</u> <i>gibraltarica</i>	white-purple	9
" <i>jucunda</i>	crimson	4
" <i>Pruiti</i>	white	6
" <i>semperviens</i>	white	6
<u>Iris</u> <i>pumila</i>	various	6
" <i>chamaeiris</i>	purple	10
" <i>graminea</i>	deep reddish purple	10
" <i>cristata</i>	blue, white	6
<u>Linaria</u> <i>alpina</i>	orange and violet	trailing
" <i>cymbalaria</i>	purple	trailing
<u>Linum</u> <i>alpinum</i>	pale blue	trailing
<u>Lychnis</u> <i>alpina</i>	reddish purple	3
<u>Oxalis</u> <i>Valdiviana</i>	yellow	6
<u>Pentstemon</u> <i>glaber</i>	purple	12
" <i>Menziesii</i>	purple	9
" <i>Scoulesii</i>	rose	12
<u>Phlox</u> <i>subulata</i>	white, pink, mauve	4

HERBACEOUS PLANTS FOR ROCKERIES (Cont'd)

<u>Genus and Species</u>	<u>Colour</u>	<u>Height in Inches</u>
<u>Saponaria</u> caespitosa	rose	3
" ocymoides	rosy purple	6
<u>Saxifraga</u> aizoides	orange and red	trailing
" aizoon	white	6
" caespitosa	white	12
" cochlearis	white	3
" Cotyledon	white	12
" decipiens	various	12
" Hostii	cream	12
" longifolia	white	18
" muscoides	red	12
" Rocheliana	white	6
" umbrosa	rose	12
<u>Sedum</u> acre	yellow	3
" album	white	6
" Ewersii	rose	9
" kamtschaticum	yellow	9
" pilosum	pink	3
<u>Silene</u> acaulis	rose	4
" alpestris	white	6
" Schafta	dark rose	3
<u>Soldanella</u> alpina	pale blue	3
" pusilla	lavender blue	3
<u>Stokesia</u> cyanea	blue	12
<u>Thymus</u> Serpyllum	purple	trailing
" albus	white	trailing
<u>Tunica</u> Saxifraga	mauve	trailing
" rosea	rose	trailing
<u>Veronica</u> alpina	blue	3
" Guthriana	blue	9
" repens	blue	trailing
" rupestris	blue	trailing
" saxatilis	blue	6
<u>Wahlenbergia</u> dalmatica	violet	6
" Kitaibeli	mauve	3
<u>Wulfenia</u> carinthiaca	blue	6

Thriving in Partial Shade

<u>Ajuga</u> genevensis	blue, rose, white	9
<u>Anemone</u> alpina	white	12
" nemorosa	white and pink	6
" Pulsatilla	mauve, red, white	12
<u>Aquilegia</u> various	various	6-24

HERBACEOUS PLANTS FOR ROCKERIES (Cont'd)

<u>Genus and Species</u>	<u>Colour</u>	<u>Height in Inches</u>
<u>Armeria</u> alpina	purple	6
<u>Astilbe</u> various	white, pink, red	4-18
<u>Campanulas</u> various	various	3-12
<u>Gentianas</u> various	various	4-12
<u>Hederas</u>	various	trailing
<u>Hepatica</u> triloba	blue	4
<u>Helleborus</u> niger	white, rose	12
<u>Linaria</u> alpina	orange and violet	trailing
" cymbalaria	purple	trailing
<u>Saxifragas</u> various		
<u>Sedums</u> various		
<u>Silene</u> aucalis	rose	3
" alpestris	white	6
<u>Soldanella</u> alpina	pale blue	3
" pusilla	lavender blue	3
<u>Wulfenia</u> carinthiaca	blue	6

Thriving in Full Shade

<u>Anemone</u> nemorosa	white and rose	6
" sylvestris	creamy white	9
<u>Corydalis</u> cheilanthifolia	yellow	9
" lutea	golden yellow	9
" ochroleuca	pale yellow	9
" ophiocarpa	yellow	9
<u>Convallaria</u> majalus	white	6
<u>Epimedium</u> alpinum	red and yellow	12
" malranthum	blue and white	9
" violaceum	deep violet	9
" niveum	white and bronze	9
<u>Funkias</u> various	white, mauve	18
<u>Helleborus</u> niger	white and rose	12
<u>Hostas</u>		
<u>Hepatica</u> triloba	blue	4
<u>Saxifragas</u> Geum	white and red	12
<u>Sisyrinchium</u> angustifolium	bright blue	9
" Bermudiana	blue	9
" brochypus	yellow	9
" montanum	deep blue	9
" striatum	cream	9

HERBACEOUS PLANTS FOR ROCKERIES (Cont'd)

<u>Genus and Species</u>	<u>Colour</u>	<u>Height in Inches</u>
<u>Sedums</u>		
<u>Thalictrum</u> Chelidonii	mauve	24
" minus adiantifolicum	mauve	12
<u>Tiarella</u> Wherri	white and rose	12
<u>Waldsteinia</u> fragarioides	yellow	12
" trifolia	yellow	6

HERBACEOUS PERENNIALS ARRANGED BY HEIGHT

Under 12 inches Tall

see Herbaceous Plants for Rockeries

Height 1 - 2 ft.

<u>Latin Name (Common Name in brackets)</u>	<u>Colour</u>	<u>Season</u>
<u>Achillea</u> ptarmica (Angels Breath)	white	early summer
" tagetea (Dwarf Yarrow)	yellow	summer
<u>Aquilegias</u> (Columbines)	various	late spring
<u>Armerias</u> (Thrifts)	pink	late spring
<u>Asclepias</u> tuberosa (Butterfly Milkweed)	orange	summer
<u>Aster</u> alpinus (Alpine Aster)	mauve	autumn
" Amellus (Italian Aster)	purple	late summer
" Novae-Anglae-Belgae (Michaelmas Daisies)	various	autumn
<u>Astilbe</u> pumila (Herbaceous Spiraea)	lilac rose	summer
" chinensis (Chinese Herb. Spiraea)	pink	late spring
<u>Bergenia</u> cordifolia (Megasea saxifraga)	rose	late spring
<u>Campanula</u> glomerata (Bell Flower)	purple	summer
" persicifolia (alba) (Peach- leaf Bellflower)	blue (white)	summer
<u>Centaurea</u> montana (Mountain Bluet)	blue	summer
<u>Chrysanthemum</u> maximum (Shasta daisy)	white	summer
" coccineum (Pyrethrum)	various	late spring
" hybridum (Cushion Mums)	various	autumn
<u>Corydalis</u> nobilis (Corydalis)	yellow	summer
<u>Coreopsis</u> verticillata	yellow	early summer

Height 1 - 2 ft.

<u>Latin Name (Common Name in brackets)</u>	<u>Colour</u>	<u>Season</u>
<u>Delphinium</u> nudicaule (dwarf Delphinium)	various	summer
<u>Dianthus</u> barbatus (Sweet William)	various	early summer
<u>Dicentra</u> spectabilis (Bleeding Heart)	pink	summer
" Eximia (Dutchman's Britches)	pink	late spring
" formosa (Dwf. Bleeding Heart)	red	summer
<u>Doronicum</u> caucasicum (Leopard's Bone)	yellow	spring
<u>Echinops</u> Ritro (Dwf. Globe Thistle)	lilac	summer
<u>Filipendula</u> palmata (Meadowsweet)	pink	summer
<u>Gaillardia</u> aristata (Blanket flower)	red and yellow	summer
<u>Gentiana</u> Andrewsii (Andrew's Gentian)	blue	early summer
<u>Geranium</u> Endressii (pink Cranesbill)	pink	summer
" lancastricense (dwf. mauve Cranesbill)	mauve	summer
" sanguineum (red Cranesbill)	red	summer
<u>Geum</u> borisi (Orange Avens)	orange red	early summer
" coccineum (Red Avens)	red	early summer
<u>Globularia</u> Alypum (Globe Flower)	violet	summer
<u>Gypsophila</u> vars. (Baby's Breath)	white, pink	summer
<u>Heuchera</u> sanguinea (Coral Bells)	pink, red	early summer
<u>Hosta</u> sp. (Funkia) (Plantain Lilies)	white, mauve	early summer
<u>Incarvillea</u> grandiflora (Trumpet Flower)	crimson	early summer
<u>Iris</u> species and varieties (dwf. Flags, Iris)	various	spring
<u>Lamium</u> galeobdolon (Dead Nettle)	yellow	summer
<u>Limonium</u> latifolium (Statice, Sea Lavender)	blue	summer
<u>Linum</u> flavum (Yellow Flax)	yellow	early summer
" perenne (Blue Flax)	blue	summer
<u>Lobelia</u> cardinalis (Cardinal Flower)	red	summer
<u>Lychnis</u> haageana (Scarlet Campion)	scarlet	summer
" viscaria splendens fl. pl. (German Catchfly)	pink	summer
<u>Mertensia</u> virginica (Virginia Bluebell)	pale blue	late spring
<u>Monarda</u> didyma (Bergamot)	red	summer
<u>Morina</u> longifolia (Whorl Flower)	purple	summer
<u>Nepeta</u> mussini (Catmint)	purple	summer

Height 1 - 2 ft.

<u>Latin Name (Common Name in brackets)</u>	<u>Colour</u>	<u>Season</u>
<u>Oenothera</u> missouriensis (Evening Primrose)	yellow	summer
" youngi (Evening Primrose)	gold	summer
<u>Phlox</u> divaricata (Early Phlox)	pink and blue	spring
<u>Platycodon</u> grandiflora (Balloon Flower)	violet	summer
<u>Polemonium</u> Richardsonii (Polemonium)	blue	summer
<u>Polygonum</u> Bistorta (Snakeweed)	pink	late summer
<u>Potentilla</u> Gibsonii (Cinquefoil)	scarlet	summer
<u>Pulmonaria</u> saccharata (Bethlehem Sage)	red-violet	spring
<u>Ranunculus</u> aconitifolius (Crowfoot)	white	summer
<u>Rudbeckia</u> speciosa (Black-eyed Susan)	orange	summer
<u>Saxifraga</u> granulata (Meadow Saxifrage)	white	summer
<u>Sedum</u> spectabile atropurp. (Tall Stonecrop)	dark red	late summer
<u>Senecio</u> pulcher (Groundsel)	rosy purple	summer
<u>Solidago</u> laurin (Lwf. Goldenrod)	yellow	late summer
<u>Stokesia</u> cyanea (Stokesaster)	blue	autumn
<u>Tradescantia</u> virginica (Spiderwort)	blue	summer
<u>Veronica</u> spicata vars. (Speedwell)	white, pink	summer

Height 2 - 3 ft.

<u>Achillea</u> millifolium roseum (Milfoil)	rose	summer
<u>Anemone</u> japonica (Jap. Windflower)	various	autumn
<u>Anthemis</u> tinctoria (Golden Camomile)	gold	summer
<u>Aster</u> ericoides (Heath Aster)	white	autumn
" novae-anglae-Belgae (Michaelmas Daisies)	various	autumn
<u>Astilbe</u> hybrida (Herbaceous Spiraea)	various	early summer
<u>Campanula</u> med. calycanthema (Canterbury Bell)	blue, rose, white	summer
<u>Centranthus</u> ruber (Valerian)	red	summer
<u>Chrysanthemum</u> hybrida (Border Mum)	various	autumn
" maximum (Shasta Dairy)	white	summer
<u>Coreopsis</u> hyb. (Coreopsis)	yellow	summer
<u>Dictamnus</u> purpureus (Gas Plant)	rosy pink	late spring

Height 2 - 3 ft.

<u>Latin Name</u> (Common Name in brackets)	<u>Colour</u>	<u>Season</u>
<u>Tremurus</u> himalaicus (Candle or Torch Lily)	white	summer
<u>Filipendula</u> hexapetala (Meadowsweet)	cream	summer
<u>Gillenia</u> trifoliata (Indian Physic)	pink	summer
<u>Gypsophila</u> paniculata (Baby's Breath)	white	summer
<u>Hemerocallis</u> hyb. (Day Lilies)	various	summer
<u>Helianthus</u> (Sunflowers)	yellow	late summer
<u>Iris</u> Germanica hyb. (Flags, Iris)	various	early summer
" siberica (Siberian Iris)	various	early summer
<u>Lupinus</u> hybrida (Russel) (Russel Lupins)	various	early summer
<u>Lythrum</u> hyb. (Lythrum)	pink	summer
<u>Nepeta</u> tatarica (Siberian Catmint)	lilac	summer
<u>Paeonia</u> officinalis hyb. (Paeonies)	various	early summer
<u>Phlox</u> paniculata (Border Phlox)	various	summer
<u>Physostegia</u> virginiana (False Dragons Head)	pink	summer
<u>Pentstemons</u> various (Beard tongue)	various	late summer
<u>Polygonums</u> various (Knotweeds)	white, yellow	summer
<u>Rudbeckias</u> (Coneflowers)	purple, yellow	summer
<u>Salvia</u> nemorosa (Purple sage)	Purple	early summer
<u>Solidago</u> various (Goldenrod)	yellow	autumn
<u>Trollius</u> chinensis vars. (Globe Flower)	yellow, orange	early summer
<u>Veronica</u> maritima subsessilis (Speedwell)	blue	summer

Height 3 - 4 ft.

<u>Achillea</u> filipendula (Golden Arrow)	yellow	late summer
<u>Aconitum</u> vars. (Monkshood)	blue	late summer
<u>Artemesia</u> Silver King (Mugwort)	foliage	--
<u>Aster</u> Novae-anglae-belgae (Michaelmas Dairy)	various	autumn
<u>Astilbe</u> various (Herbaceous Spiraea)	white, pink	summer
<u>Chrysanthemum</u> hybrida (Border Mum)	various	autumn
<u>Cnicifuga</u> racemosa (Snakeroot)	cream	autumn
<u>Clematis</u> recta (Bush Clematis)	white, mauve	late summer

Height 3 - 4 ft.

<u>Latin Name (Common Name in brackets)</u>	<u>Colour</u>	<u>Season</u>
<u>Dictamnus</u> purpureus (Gas Plant)	rosy pink	early summer
<u>Doronicum</u> austriacum (Giant Leopard's Bane)	yellow	spring
<u>Echinacea</u> (Coneflower)	white, red	late summer
<u>Echinops</u> (Globe Thistle)	blue	summer
<u>Fremurus</u> robustus (Candle or Torch Lily)	pink	summer
<u>Erigeron</u> speciosus vars. (Fleabane)	white, pink, blue	summer
<u>Euphorbia</u> corollata (Flowering Spurge)	white	summer
" epithymoides (Spurge)	yellow	spring
<u>Filipendula</u> rubra venusta (Meadowsweet)	rosy pink	summer
<u>Helianthus</u> (Sunflower)	orange yellow	late summer
<u>Helenium</u> (Sneezeweed)	orange, red	autumn
<u>Hemerocallis</u> hyb. (Day Lilies)	various	summer
<u>Iris</u> Germanica (Flags, Iris)	various	early summer
" Paempferi (Japanese Iris)	various	early summer
" Pseudoacorus (Yellow Flag)	yellow	late spring
<u>Liatris</u> pycnostachia (Blazing Star)	purple	autumn
" scariosa vars. (Gayfeather)	white, purple	autumn
<u>Ligularia</u> Wilsoniana (Giant Groundsel)	yellow	summer
<u>Lychnis</u> chalcedonica (Maltese Cross)	scarlet	summer
<u>Lysimachia</u> punctata (Loosestrife)	yellow	early summer
<u>Lythrum</u> hyb. (Lythrum)	pink, red	summer
<u>Monarda</u> didyma vars. (Bergamot)	pink, red	summer
<u>Paeonia</u> albiflora vars. (Paeonies)	various	late spring
<u>Papaver</u> orientale (Oriental Poppies)	various	late spring
<u>Perovskia</u> atriplicifolia (Perovskia)	lavender	summer
<u>Phlox</u> paniculata (Border Phlox)	various	summer
<u>Pentstemon</u> s various (Beard-tongue)	various	late summer
<u>Salvia</u> Pitcheri (Flowering Sage)	blue	summer
<u>Scabiosa</u> caucasia hyb. (Pincushion)	blue	summer
<u>Solidago</u> various (Goldenrod)	yellow	autumn
<u>Trollius</u> ledebouri (Globe Flower)	orange yellow	early summer

Height Exceeding 4 ft.

<u>Latin Name (Common Name in brackets)</u>	<u>Colour</u>	<u>Season</u>
<u>Achillea</u> filipendulinum (Fernleaf Yarrow) 5 ft.	yellow	summer
<u>Aconitum</u> fischeri (Monkshood) 4-5 ft.	blue	late summer
" napellus (Monkshood) 4-5 ft.	dark blue	late summer
" wilsoni (Monkshood) 4-5 ft.	mauve	late summer
<u>Althea</u> hybrids (Hollyhocks) 5-7 ft.)	various	summer
<u>Anchusa</u> azurea (Bugloss) 4 ft.	blue	early summer
<u>Aruncus</u> sylvester (Goats Beard) 4-7 ft.	white	summer
<u>Boltonia</u> asteroides (Boltonia) 6 ft.	white	autumn
" latisquama (Boltonia)	lavender	autumn
<u>Cortaderia</u> rudiusscula (Pampas Grass) 8 ft.	white	autumn
<u>Delphinium</u> elatum (Delphinium) 5-7 ft.	various	early summer
<u>Epilobium</u> angustifolium (Giant Willow Herb) 8 ft.	purple	autumn
<u>Filipendula</u> rubra (Queen of the Prairie) 8 ft.	pink	summer
" Ulmaria (Queen of the Meadow) 6 ft.	white	summer
<u>Heliopsis</u> incomparabilis (Sunflower) 4-5 ft.	yellow	late summer
<u>Hibiscus</u> palustris (Rose Mallow) 4-5 ft.	various	late summer
<u>Polygonum</u> cuspidatum (Mexican Bamboo) 8 ft.	greenish	autumn
<u>Rudbeckia</u> maxima (Texas Coneflower) 9 ft.	yellow	summer
<u>Solidago</u> sempervirens (Tall goldenrod) 8 ft.	yellow	autumn
" speciosa (Eastern goldenrod) 6 ft.	yellow	autumn

VIII. WINTER PROTECTION OF ORNAMENTALS

Most of the species and varieties of trees, shrubs, evergreens and herbaceous plants which are recommended for planting in the Okanagan and adjacent valleys are reliably hardy. By this we mean that, if properly conditioned, these plants should come through a "normal" winter unscathed. A certain number of species are recommended for planting despite the fact that they are not reliably hardy by which is meant that they probably will be injured in excessively severe winters, and under all circumstances particular care should be taken to locate them in sheltered places, to insure that they are well ripened before the cold weather begins, and in some cases, that winter protection is supplied.

In a mountainous area like we have here, there are innumerable small pockets in which the climate differs quite widely from that of the district. These differences as they affect hardiness, are accentuated by variations in soil type. Gardeners who are located in frost pockets, like those who are in fully exposed situations or who are on heavy soil types should use particular discretion in choosing what to plant. They should take extra precautions to obtain maximum hardiness, and in many cases winter protection of species which are subject to injury should be a routine garden operation.

Causes of Winter Injury

Winter injury as it affects most of the evergreens recommended for this area is usually the result of dessication or death of tissue from drying out. Evergreens, as the word implies, retain their foliage throughout the winter. This foliage transpires, or gives off moisture, throughout the winter. If the weather is very cold and the air is dry, the moisture loss is high indeed. Wind accentuates this situation. As long as the ground is moist, the roots can keep up to the moisture demands, but if the soil dries out, or if it becomes frozen throughout the root zone, moisture uptake is reduced or stopped, the leaves continue to transpire, and the plant succumbs to winter drought. If the root system is restricted or injured, as

is the case in a newly transplanted shrub, the danger of dessication is increased proportionately. For this reason, early spring planting is to be preferred over fall planting in this area.

The type of winter injury which affects deciduous species is different from that affecting evergreens. In these cases it is intense cold itself, or alternate freezing and thawing, which actually kills the cells in the plant tissue. Differences in hardiness often can be related directly to differences in the minimum temperature which the plant can withstand before the cell components freeze and are killed. Usually the flower buds suffer first. New wood is next to be injured, followed by crotches and trunk, then older wood, and finally the underground parts.

Herbaceous species, bulbs and tubers, etc., like the deciduous trees and shrubs, differ in their ability to withstand low temperatures. For example, tuberous begonias and canna lilies are killed by even a few degrees of frost on the roots, while paeonies and tulips will survive long periods in frozen ground. Aside from this factor, however, alternate freezing and thawing can result in death even when the minimum has not exceeded that which a species generally can withstand.

One of the important characteristics of winter hardiness of a given species is that it is a condition which is acquired over a period of time in any given season. With the advent of short days, cold nights and low daytime temperatures in autumn, foliage ceases to function actively in all species, turns colour and drops off in deciduous plants, or dies to the ground in the herbaceous plants. The sap thickens and moves downward to the roots, and the plant tissue as it "ripens off", acquires the ability to withstand frost. These processes are hastened by increasing cold, but a sudden sharp drop in temperature before the stage of maximum hardiness has been reached can result in severe injury and death to species that are normally hardy.

Protective Measures

The question arises as to what if anything the gardener can do to insure against winter injury. In the light of the foregoing brief discussion, there are several precautions he can and should take.

First, a gardener can save himself a good deal of worry if he restricts his basic plantings to those species which are known to be reliably hardy. If some of his plants are known to be tender, the usual approach is to lift them and move them into a cool greenhouse or protected cold frame.

Ripening Off

Ripening of everything in the garden should be hastened and insured by checking vegetative growth early in the fall. This can be done by cutting off the irrigation for ten days to two weeks or longer, depending of course on the weather. New growth of trees, shrubs and even lawns which is made late in the season, is predisposed to winter kill.

Mounding

Later in the season, usually in late October, some species which are known to be susceptible to winter injury can be mounded with earth, or peat moss covered with earth. Tea, grandiflora and floribunda roses fall into this category. Climbing and rambling roses likewise should be handled in this way, so that if the winter is severe enough to kill the canes, the plants will come away from ground level the following year.

Top-grafted or budded species, like the rose standards, are more difficult to protect. One approach is to bend the standard to the ground and mound over the tops with peat and soil. A second approach is to tie excelsior or similar insulation around the top, cover and tie with polyethylene plastic, and secure the top tightly to a heavy stake to prevent wind damage.

Mouse Damage

Grass, weeds and undergrowth should be cleared away from the base of trees, to prevent mouse damage. Poison baits can be helpful in this regard, if put out early in the winter under inverted flumes or planks to keep them away from the birds.

Mulching

Low growing species which are known to be tender can be given a better chance of survival if they are mulched with leaves, shavings, coarse peat, or other loose insulation. However, application of such materials should be delayed until mid-November, by which time the mice will have settled in elsewhere. These mulches should be removed in late February or early March, before growth commences. If left in place too long they encourage mold and fungus growth.

Actually, snow is the ideal and natural winter protection for most species, and it is lack of reliable snow cover that makes gardening difficult in some parts of the Okanagan. A scattering of evergreen boughs over susceptible areas where plants sensitive to freezing and thawing are located will help to retain what snow does fall.

Reducing Scorch Injury to Evergreens

Broad-leafed evergreens and some conifers are particularly vulnerable to scorching during periods of bright sunshine in the winter. The best approach with these species is to locate them in a Northern exposure, or to plant evergreens and trees around them to break the sun. A Southern exposure, particularly near a wall or walk is exceptionally critical, and in such locations all broad-leafed and many other sensitive evergreens should be protected with evergreen boughs pinned down to prevent their being blown away.

There is a fairly recent development in methods of reducing winter scorch in evergreen species which are too tall to protect with evergreen boughs. This method consists of spraying the shrub in late

autumn with a milky plastic solution which sets or hardens to form a clear plastic coating over the leaflets. This reduces moisture loss by transpiration throughout the cold weather, and effectively reduces resultant winter damage. The material, known as an anti-transpirant, is fairly expensive. However, it is easy to apply, is invisible, and flakes away of its own accord when new growth commences in the spring. Such materials are becoming widely used in commercial nurseries, and are likely to prove useful in many garden situations as well.

Snow Load

Certain evergreens with upright growing branches are vulnerable to injury from snow load. Too frequently one sees specimens in this category wrapped with burlap and looking throughout the winter like misplaced mummies. This burlap wrapping, aside from being most unsightly, can do more harm than good. If such species must be planted, their branches can be protected from distortion by winding stout cord fairly tightly around the periphery of the shrub to snug the branches together.

In any case, after a particularly heavy fall of snow, it pays the gardener to tour his property and using a soft broom, to sweep excessive weights of snow off the branches of evergreens which are suffering from distortion.

Irrigation

A late and adequate fall irrigation is recommended to reduce susceptibility to winter drought. One application in late October, sufficient to penetrate the soil to a depth of 3 feet, is adequate insurance on most soil types.

When all possible precautions have been taken to protect the garden from winter injury, the gardener finds his worries are reduced. At this time he is prepared to settle in by the warmth of the fire, and actually enjoy many of the wondrous changes which frost and snowstorms can create in the winter landscape.

