



A Case Study

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Study on herbaceous perennials of Kashmir valley for landscape use

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ABSTRACT : The present investigation on the study on herbaceous perennials of Kashmir valley for landscape use were conducted in three districts of Kashmir valley .For this purpose four representative sites were selected and observations on prominent characteristic viz., type of inflorescence, flower size, flower shape, fragrance, flower colour as per (RHS colour chart) foliage colour, foliage texture and landscape use were recorded by making exploratory trips to these sites. The study revealed a large number of ornamental bulbous plants growing satisfactorily in this environment and producing a majestic display in gardens from early spring until late fall.

KEY WORDS : Ground cover, Landscaping, Herbaceous perennials

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Bulbous plants are grown mainly for their decorative and sometimes fragrant flowers. They add beauty and interest to the landscape. Different types of bulbs offer variation in form, fragrance, colour and lasting display. Bulb make perfect partners for specimen trees with deep roots and deciduous canopies. The flowers of bulbs can complement a trees's habit effectively. White flowered bulbs mirror the white blossom of ornamental cherries (prunus) the crisp shape of crocuses echo the chalice form of magnolia blooms, and bulbs with pendent flowers imitate the habit of weeping tree (Brickell, 1996). Bulbs do wonders in the foreground of shrubbery, blend in beautifully with a woodland scene, liven up any border, and some can even compete with turf if their foliage is always allowed to ripen before the grass is mowed. Foliage is one of the greatest importance in perennials as well as their shape and size colour comes to the fore an it is all too seldom appreciated by gardeners that to arrange plants according to the colour of their flowers (Kelly and Hiller, 1995) .All these features of 53 bulbous plants in the landscape were studied in the present investigation.

RESEARCH METHODS

The present studies were conducted during the year

2006-07, through 2008-2009 in Srinagar, Gulmarg, Sonmarg and Kokernag areas of the Kashmir valley. In the present studies survey and identification of native and introduced bulbous plants of ornamental value were made and observations on prominent characteristics related to floristic and landscape use of different species were recorded by making exploratory trips to the following sites of Kashmir valley (a) Srinagar (Barzulla, sheikh bagh, Sonwar, Gupkar, Shankarcharja Hills, Zabarwan Hills, Dachigam, Nishat, Shalimar, Cheshmashahi, Telbal Hazratbal, Naseem bagh (b) Sonmarg (Sonmarg, Thajwas (c) Gulmarg (Gulmarg, Tangmarg, Baba Reshi) (d) Kokernag (kokernag, Wagan, Sagam).

RESEARCH FINDINGS AND DISCUSSION

Fifty three bulbous species growing in the surveyed areas were evaluated for types of inflorescence, flower size, flower shape, fragrance, foliage colour, foliage texture. Flower colour (as per RHS colour chart) and landscape use growing in the surveyed areas are depicted in Table 1, 2, 3 and 4.

Data present in Table 1 revealed that out of fifty three bulbous plants evaluated for their type of inflorescence, fourteen species were having solitary inflorescence. Twelve bulbous species were found to have raceme type of

Table 1 : Characteristics of bulbous plants used for landscaping in temperate regions

Sr. No.	Scientific name	Common name	Family	Type of inflorescence	Flower size (cm)	Flower shape	Flower fragrance
1.	<i>Alstroemeria aurantiaca</i>	Peruvianlily	Alstroemeriaceae	Umbel	8	Funnel	Moderate
2.	<i>Amaryllis belladonna</i>	Belladonnalily	Amaryllidaceae	Umbel	20	Funnel	Strong
3.	<i>Anemone biflora</i>	Wind flower	Ranunculaceae	Cluster	3	Saucer	-
4.	<i>Anemone x hybrida</i>	Japanese anemone	Ranunculaceae	Cluster	9	Saucer	-
5.	<i>Begonia evansiana</i>	Begonia	Begoniaceae	Cyme	3.5	Star	-
6.	<i>Begonia x Semperflorens</i>	Fibrous rooted Begonia	Begoniaceae	Cyme	3.5	Star	-
7.	<i>Begonia x tuberhybrida</i>	Multi-flora and pendula begonices	Begoniaceae	Cyme	4	Star	-
8.	<i>Belamcanda chinensis</i>	Blackberry lily/Leopard lily	Iridaceae	Solitary	4	Cup	-
9.	<i>Canna indica</i>	India shot canna	Cannaceae	Raceme	7	Trumped	-
10.	<i>Clivia miniata</i>	Kaffir lily	Amaryllidaceae	Umbel	3	Trumped	Moderate
11.	<i>Colchicum luteum</i>	Autumn crocus/naked ladies	Ranunculaceae	Flower Head	3	Goblet	-
12.	<i>Crococsmia masoniorum</i>	Montretia	Iridaceae	Spikelets	1	Funnel	-
13.	<i>Crocus chrysanthus</i>	Winter crocus	Iridaceae	Solitary	4.5	Cup	-
14.	<i>Crocus sativus</i>	Saffron crocus	Iridaceae	Solitary	5	Cup	-
15.	<i>Dahlia variabilis</i>	Dahlia	Compositial	Flower Head	20	Pompon	-
16.	<i>Eranthis hyemalis</i>	Winter aconite	Ranunculaceae	Solitary	3	Cup	Moderate
17.	<i>Eremurus himalaicus</i>	Desert candle/foxtail lily	Asphodelaceae	Raceme	2.5	Star	-
18.	<i>Fressia X hybrida</i>	Fressia	Iridaceae	Raceme	5	Funnel	Strong
19.	<i>Fritillaria imperialis</i>	Crown imperial	Liliaceae	Umbel	8	Bell	Strong
20.	<i>Gagea elegans</i>	Yellow star of Bethelam	Liliaceae	Cluster	2	Star	-
21.	<i>Galanthus nivalis</i>	Common snowdrop	Amaryllidaceae	Solitary	1	Bell	-
22.	<i>Gladiolus byzanthus</i>	Gladioli	Iridaceae	Spikelets	5	Funnel	Strong
23.	<i>Gloriosa rothschildiana</i>	Glory or climbing lily	Colchicaceae	Solitary	9	Slipper	-
24.	<i>Hemerocallis flava</i>	Common yellow Day lily	Hemerocallidaceae	Solitary	10	Trumpet	-
25.	<i>Hippeastrum puniceum</i>	Gaint Amarylli's	Amaryllidaceae	umbel	15	Funnel	-
26.	<i>Hyacinthus orientalis</i>	Sommon Hyacinth	Hycinthaceae	Raceme	2.5	Bell	Strong
27.	<i>Iris ensata</i>	Blue flag/Japanese Iris	Iridaceae	Spikelets	13	Slipper	-
28.	<i>Iris germanica</i>	German Iris/Tall Bearded Iris	Iridaceae	Spikelets	10	Slipper	-
29.	<i>Iris 'Gingerbread Man'</i>	Iris	Iridaceae	spikelets	6	Slipper	-
30.	<i>Iris japonica</i>	Iris	Iridaceae	Spikelets	5	Slipper	-
31.	<i>Iris kashmeriana</i>	Iris	Iridaceae	spikelets	10	Slipper	-
32.	<i>Iris reticulata</i>	Spanish Iris	Iridaceae	Spikelets	5	Slipper	Strong
33.	<i>Iris tectorum</i>	Roof Iris	Iridaceae	spikelets	8	Slipper	-
34.	<i>Iris unguicularis</i>	Iris	Iridaceae	Spikelets	7	Slipper	Moderate
35.	<i>Ixiolirion karateginum</i>	Iiilirion	Amaryllidaceae	Raceme	5	Funnel	-
36.	<i>Leucojum aestivum</i>	Snow flaxe	Amaryllidaceae	Solitary	4	Bell	Moderate
37.	<i>Lilium auratum</i>	Gold band lily	Liliaceae	Raceme	30	Bowl	Moderate
38.	<i>Lilium canidum</i>	Madonna lily	Liliaceae	Raceme	5	Trumpet	Moderate
39.	<i>Lilium longiflorum</i>	Easter lily/White trumpet lily	Liliaceae	Raceme	6	Trumpet	Strong
40.	<i>Lycoris radiata</i>	Red spider lily	Amaryllidaceae	Umbel	1	Tubular	-
41.	<i>Muscari armeniacum</i>	Grape Hyacinth	Hycinthaceae	Raceme	0.5	Tubular	-
42.	<i>Narcissus pseudonacisus</i>	Trumpet narcissus	Amaryllidaceae	Solitary	4	Trumpet	-
43.	<i>Narcissus tazetta</i>	Polyanthers narcissus	Amaryllidaceae	Solitary	4	Trumpet	Moderate
44.	<i>Nerine bowdenii</i>	Spider lily	Amaryllidaceae	Umbel	8	Funnel	Moderate
45.	<i>Ornithogalum umbellatum</i>	Star of Bethlehem	Hycinthaceae	Raceme	2	Star	-
46.	<i>Scilla bifolia</i>	Blue bell/Squill	Hycinthaceae	Raceme	4	Star	-
47.	<i>Scilla siberica</i>	Siberian Squill	Hycinthaceae	Raceme	1.5	Saucer	-
48.	<i>Sprekelia formosissima</i>	Jacobean lily/Aztec lily	Amaryllidaceae	Solitary	12	Star	-
49.	<i>Sternbergia lutea</i>	Autumn Daffodil	Amaryllidaceae	Solitary	4	Funnel	-
50.	<i>Tulipa Clusiana</i>	Lady tulip	Liliaceae	Solitary	5	Goblet	-
51.	<i>Tulipa lanata</i>	Mughul tulip	Liliaceae	Solitary	4	Goblet	-
52.	<i>Zantedeschia aethiopica</i>	Arum lily/Calla of gardeners	Araceae	Spathe	25	Funnel	-
53.	<i>Zanteeschia elliotiana</i>	Golden Arun/Golden calla	Araceae	Spathe	15	Funnel	-

Table 2 : Flower colour recorded as per RHS colour chart		
Sr. No.	Name of Species	Flower Colour
1.	<i>Alstroemeria aurantiaca</i>	Fuchsine Pink-627/2
2.	<i>Amaryllis belladonna</i>	Persian Rose -628/2
3.	<i>Anemone biflora</i>	White + Magenta -27/3
4.	<i>Anemone x hybrida</i>	Pure white
5.	<i>Begonia evansiana</i>	Magenta -27/3
6.	<i>Begonia x Semperflorens</i>	Blood Red -802/7
7.	<i>Begonia x tuberhybrida</i>	Magenta -27/2
8.	<i>Belamcanda chinensis</i>	Mandarian Red- 17 with sports of cadmium orange – 8/2 base
9.	<i>Canna indica</i>	Vermilion -18
10.	<i>Clivia miniata</i>	Nasturtium Red -14/1
11.	<i>Colchicum luteum</i>	Butter Cup Yellow -5
12.	<i>Crocospia masoniorum</i>	Delft Rose -020/1
13.	<i>Crocus chrysanthus</i>	Butter Cup Yellow -5
14.	<i>Crocus sativus</i>	Campanula violet-37/1
15.	<i>Dahlia variabilis</i>	Multi colored
16.	<i>Eranthis hyemalis</i>	Lemon Yellow-4/1
17.	<i>Eremurus himalaicus</i>	Canary Yellow -2/3
18.	<i>Fressia x hybrida</i>	-
19.	<i>Fritillaria imperialis</i>	Orpiment Orange - 10/1
20.	<i>Gagea elegans</i>	Sulphur yellow-1/3/
21.	<i>Galanthus nivalis</i>	Pure white with inner Tepals nickle green -57 tipped
22.	<i>Gladiolus byzanthus</i>	Rhodanine purple-29
23.	<i>Gloriosa rothschildiana</i>	Cherry-72 with lemon yellow-4/2 streaks
24.	<i>Hemerocallis flava</i>	Lemon yellow-4
25.	<i>Hippeastrum puniceum</i>	Dutch vermilion-717
26.	<i>Hyacinthus orientalis</i>	Spectrum Blue-41/
27.	<i>Iris ensata</i>	Wistaria Blue-640
28.	<i>Iris germanica</i>	Hyacinth Blue-40/1
29.	<i>Iris "Gingerbread Man"</i>	Garnet Brown 00919
30.	<i>Iris japonica</i>	White with Blue bird Blue-042/2 margins
31.	<i>Iris Kashmeriana</i>	Campanula violet-37/2
32.	<i>Iris reticulata</i>	Hyacinth Blue- 40
33.	<i>Iris tectorum</i>	Campanula violet-37
34.	<i>Iris unguicularis</i>	Veronica violet-639/1
35.	<i>Ixiolirion Karateginum</i>	Lobelia Blue-41/3
36.	<i>Leucojum aestivum</i>	Pure white
37.	<i>Lilium auratum</i>	White tepals with central Golden band
38.	<i>Lilium candidum</i>	Pure white
39.	<i>Lilium longiflorum</i>	White
40.	<i>Lycoris radiata</i>	Scarlet- 19/1
41.	<i>Muscari armeniacum</i>	Lobelia Blue-41
42.	<i>Narcissus pseudonacissus</i>	Yellowish cream
43.	<i>Narcissus tazetta</i>	Cream
44.	<i>Ornithogalum umbellatum</i>	Pure white with Agathia green-60/3 base
45.	<i>Scilla bifolia</i>	Dahlia Purple -931/3
46.	<i>Scilla siberica</i>	Spectrum Blue -45/1
47.	<i>Sprekelia formosissima</i>	Scarlet -19
48.	<i>Sternbergia lutea</i>	Lemon yellow
49.	<i>Tulipa Clusiana</i>	White with Tyrian Rose-24/3 streaked
50.	<i>Tulipa lanata</i>	Jasper Red-018
51.	<i>Zantedeschia aethiopica</i>	Pure white
52.	<i>Zantedeschia elliottiana</i>	Aureolin-3

Table 3 : Foliage characteristics of Bulbous plants for landscape use			
Sr. No.	Bulbous plants	Foliage colour	Foliage texture
1.	<i>Alstroemeria aurantiaca</i>	Grey green	Smooth
2.	<i>Amaryllis belladonna</i>	Mid green	Fleshy
3.	<i>Anemone biflora</i>	Mid green	Soft
4.	<i>Anemone X hybrida</i>	Mid green	Soft
5.	<i>Begonia evansiana</i>	Dark green above and reddish on lower surface	Glossy
6.	<i>Begonia x Semperflorens</i>	Pale green	Glossy
7.	<i>Begonia x tuberhybrida</i>	Reddish green	Rough and fleshy
8.	<i>Belamcanda chinensis</i>	Mid Green	Smooth
9.	<i>Canna indica</i>	Dark green often broze tinted	Smooth
10.	<i>Clivia miniata</i>	Mid green	Fleshy
11.	<i>Colchicum luteum</i>	Mid green	fleshy
12.	<i>Crocospia masoniorum</i>	Mid green	Rough
13.	<i>Crocus chrysanthus</i>	Pale green with pale silvery green central strips	Smooth
14.	<i>Crocus sativus</i>	Pale green	Smooth
15.	<i>Dahlia variabilis</i>	Green	Pubescent
16.	<i>Eranthis hyemalis</i>	Dark green	Rough
17.	<i>Eremurus himalaicus</i>	Dark green	Smooth
18.	<i>Fressia X hybrida</i>	Mid green	Smooth
19.	<i>Fritillaria imperialis</i>	Mid Green	Smooth
20.	<i>Gagea elegans</i>	Mid green	Smooth
21.	<i>Galanthus nivalis</i>	Bluish green	Soft
22.	<i>Gladiolus byzanthus</i>	Dark green	Smooth
23.	<i>Gloriosa rothschildiana</i>	Dark green	Gloosy
24.	<i>Hemerocallis flava</i>	Dark bluish green	Smooth
25.	<i>Hippeastrum puniceum</i>	Mid green	Smooth
26.	<i>Hyacinthus orientalis</i>	Dark green	Fleshy
27.	<i>Iris ensata</i>	Mid green	Smooth
28.	<i>Iris germanica</i>	Grey green	Smooth
29.	<i>Iris 'Gingerbread Man'</i>	Dark green	Gloosy
30.	<i>Iris japonica</i>	Dark green	Gloosy
31.	<i>Iris kashmeriana</i>	Dark green	Smooth
32.	<i>Iris reticulata</i>	Mid green	Smooth
33.	<i>Iris tectorum</i>	Dark green	Glossy
34.	<i>Iris unguicularis</i>	Mid green	Rough
35.	<i>Ixiolirion karateginum</i>	Mid green	Smooth
36.	<i>Leucojum aestivum</i>	Dark green	Gloosy
37.	<i>Lilium auratum</i>	Dark green	Gloosy
38.	<i>Lilium candidum</i>	Dark green	Gloosy
39.	<i>Lilium longiflorum</i>	Mid green	Smooth
40.	<i>Lycoris radiata</i>	Dark green	Smooth and fleshy
41.	<i>Muscari armeniacum</i>	Mid green	Rough
42.	<i>Narcissus pseudonacissus</i>	Bluish green	Soft
43.	<i>Narcissus tazetta</i>	Mid green	Soft
44.	<i>Nerine bowdenii</i>	Dark green	Smooth and fleshy
45.	<i>Ornithogalum umbellatum</i>	Mid green	Soft
46.	<i>Scilla bifolia</i>	Dark green	Smooth
47.	<i>Scilla siverica</i>	Dark green	Smooth
48.	<i>Sprekelia formosissima</i>	Dark green	Smooth
49.	<i>Sternbergia lutea</i>	Mid green	Smooth
50.	<i>Tulipa Clusiana</i>	Mid green	Soft
51.	<i>Tulipa lanata</i>	Grey green	Soft
52.	<i>Zantedeschia aethiopica</i>	Dark green	Glossy
53.	<i>Zanteeschia elliottiana</i>	Dark green	Rough

Table 4 : Landscape use of bulbous plants

Sr. No.	Scientific name	Beds	Borders	Pathways	Woodlands	Rock garden	Companion plant	Ground cover	Specimen plant	Back-drop	Pots
1.	<i>Alstroemeria aurantiaca</i>		✓								
2.	<i>Amaryllis belladonna</i>		✓								
3.	<i>Anemone biflora</i>	✓	✓								
4.	<i>Anemone X hybrida</i>	✓	✓								
5.	<i>Begonia evansiana</i>	✓	✓		✓						
6.	<i>Begonia X Semperflorens</i>	✓	✓								
7.	<i>Begonia X tuberhybrida</i>	✓	✓								
8.	<i>Belamcanda chinensis</i>		✓			✓					
9.	<i>Canna indica</i>	✓	✓								
10.	<i>Clivia miniata</i>	✓	✓								
11.	<i>Colchicum luteum</i>	✓						✓			
12.	<i>Crocsmia masoniorum</i>		✓								
13.	<i>Crocus chrysanthus</i>	✓	✓			✓					✓
14.	<i>Crocus sativus</i>	✓	✓			✓					
15.	<i>Dahlia variabilis</i>	✓							✓		
16.	<i>Eranthis hyemalis</i>	✓						✓			
17.	<i>Eremurus himalaicus</i>		✓								✓
18.	<i>Fressia X hybrida</i>		✓								
19.	<i>Fritillaria imperialis</i>	✓	✓		✓	✓					
20.	<i>Gagea elegans</i>	✓			✓	✓					
21.	<i>Galanthus nivalis</i>		✓		✓	✓					
22.	<i>Gladiolus byzanthus</i>		✓								
23.	<i>Gloriosa rothschildiana</i>	✓									
24.	<i>Hemerocallis flava</i>		✓		✓	✓					
25.	<i>Hippeastrum puniceum</i>		✓								
26.	<i>Hyacinthus orientalis</i>	✓									
27.	<i>Iris ensata</i>		✓			✓					
28.	<i>Iris germanica</i>		✓			✓					✓
29.	<i>Iris 'Gingerbread Man'</i>		✓			✓					
30.	<i>Iris unguicularis</i>		✓			✓					✓
31.	<i>Iris kashmeriana</i>		✓			✓					
32.	<i>Iris reticulate</i>		✓			✓					
33.	<i>Iris tectorum</i>		✓			✓					
34.	<i>Iris japonica</i>	✓	✓			✓					✓
35.	<i>Ixiolirion karateginum</i>	✓									
36.	<i>Leucojum aestvum</i>							✓			
37.	<i>Lilium auratum</i>		✓		✓	✓					
38.	<i>Lilium candidum</i>		✓		✓	✓					
39.	<i>Lilium longiflorum</i>		✓		✓	✓					
40.	<i>Lycoris radiate</i>		✓			✓					
41.	<i>Narcissus pseudonarcissus</i>		✓		✓	✓					
42.	<i>Narcissus tazetta</i>		✓		✓	✓					
43.	<i>Nerine bowdenii</i>			✓		✓					
44.	<i>Muscari armeniacum</i>	✓				✓					
45.	<i>Ornithogalum umbelatum</i>	✓				✓		✓			
46.	<i>Scilla bifolia</i>	✓	✓								
47.	<i>Scilla siberica</i>	✓	✓								
48.	<i>Sprekelia formosissima</i>		✓								
49.	<i>Sternbergia lutea</i>		✓		✓	✓					
50.	<i>Tulipa Clusiana</i>	✓	✓		✓						
51.	<i>Tulipa Lanata</i>	✓	✓		✓						
52.	<i>Zantedeschia aethiopica</i>	✓			✓						
53.	<i>Zantedeschia elliotiana</i>	✓			✓						

inflorescence. Spike type of inflorescence was found in ten bulbous plants. Umbel type of inflorescence was present in seven bulbous plants. Three species of Begonia were having cymes type of inflorescence. *Amemone biflorea*, *Anemone x hybrida* and *Gagea elegans* were having cluster type of inflorescence.

Zantedeschia aethiopica and *Z. elliothiana* have spathe type of inflorescence whereas flower head type of inflorescence is present in *Dahlia variabilis* and *Colchicum luteum*.

Funnel shaped flowers were recorded in eleven bulbous plant species as in *Alstroemeria aurantiaca* and *Crocsmia masoniorum*. Nine species produced slipper shape flowers as in *Gloriosa rothschildiana*, *Iris germanica*, *I. Japonica*. Star shaped flowers were observed in seven species as *Eremurus himalaicus*, *Gagea elegans*. Trumpet shaped flowers were observe in seven species as in *Canna indica* and *Clivia miniata* cup shaped flowers were observed in *Belamcanda chinensis*, *Crocus chrysanthus*, *C. sativus* and *Eranthis hyemalis*. Bell shaped flowers were produced by *Fritillaria imperialis*, *Galanthus nivalis*, *Hyacinthis orientalis* and *Leucajum aestivum* saucer shaped flowers were observed in *Tulipa clusiana*, *Muscari armeniacum* and *Lycoris radicata*. *Dahlia variabilis* produced pompon shaped flower *Lilium auratum* bowl shaped flowers. These features such as type of inflorescence, size, shape can be used by designers to generate the character of a landscape.

Fragrance of flowers was recorded by smelling for common man interested in gardening. Sweet fragrance makes the environment solaceous and pervades the whole atmosphere in the cool of a summer's evening which after all, is the most pleasant time for relaxation in the garden, this wonderful sweet fragrance happily enriches the mellowing dusk for many meters around. The addition of fragrance to the other natural attributes of a plant add to its value as a garden plant. Persual of Table 1 further depicts that out of fifty three bulbous plants evaluated for fragrance of their flowers, six flowers had strong scented fragrance as in case of *Amaryllis belladonna*, *Fressia x hydrida*, *Hyacinthus orientalis*. Moderate smelling flowers were found in nine species as *Alstroemeria aurantiaca*, *Clivia miniata*, *Leucojum aestivum*. Colour in plants is normally thought of as flower or fruit colour because those are the most striking, foliage likewise have colour of considerable range. In the present studies the foliage colour of species was recorded and has been depicted in Table 1. Twenty two species were having dark green colour with *Begonia evensiana* having dark colour above and reddish on lower surface. Twenty one species were having mid green leaves as *Anemone species*. Three species namely *Alstroemeria aurantiaca*, *Iris germanica* and *Tulipa lanata* Produced grey green leaves. Pale green coloured foliage was noticed in *Begonia semperflorens*, *Crocus sativus* and *Crocus chrysanthus*. Bluish green foliage was produced by three

species viz., *Galanthus nivalis*, *Narcissus pseudonarcissus* with *Hemerocallis flava* having dark bluish green foliage. Reddish green foliage was observed in only one species namely *Begonia x tuberhybrida*. The foliage texture refers to the surface structure. Appreciable differences in foliage texture was noticed in bulbous plant species. Various textures such as soft, smooth, rough, pubescent, tomentose, glossy, fleshy and prickly were recorded. The investigation reveals that out of fifty three bulbous plant species, twenty four plants were valued for their smooth texture as *Alstroemeria aurantiaca*, *Belamcanda chinensis*, *Canna indica*. The plants were valued for their glossy texture like *Iris japonica*, *Zantedeschia aethiopica*. Eight plants were valued for their soft texture such as *Amemone x hydrida*, *Anemone biflora* and *Galanthus nivalis*. Six species were valued for their rough texture with *Begonia x tuberhybrida* having rough fleshy texture. Four species namely *Amaryllis belladonna*, *Clivia miniata*, *Hyacinthus orientalis*, *Colchicum luteum* had thick and fleshy foliage. Pubescent foliage was noticed in one specie namely *Dahlia variabilis*. Color is an important component in landscape design and the major contribution is of flowers. The floral colours are more appealing than manmade ones. The range of colours obtained in flowers is very vast. In the present study the flower colour was recorded with RHS (Royal Horticulture Society) colour charts to ensure as much uniformity of result as possible and is depicted in Table 2. Landscape today is more important than ever before as the highways, parks and banks of lakes/ rivers become more crowded. Beautiful places and quite retreats where people can relax and enjoy nature become more essential. The planting of landscape plant is an easy and effective way to increase the beauty of tourist sites some uses of bulbous plants is listed below as.

Beds:

Among fifty three bulbous plants twenty- six species (*Anemone biflora*, *A x hydrida*, *Begonia evansiana*, *Canna indica*, *Clivia minita*) are suitable for growing in beds.

Borders:

Out of fifty –three bulbous species evaluated for various landscape uses, it was observed that forty bulbs (*Alstroemeria aurantiaca*, *Belamcanda chinensis*, *Crocsmia masonorum*) are best suited for use in borders.

Pathways:

It was observed that among bulbous plants *Nerine bowdenii* and *Lycoris radiata* are suitable for growing against pathways

Rock garden:

Twenty–three Bulbous plants (*Crocus chrysanthus*, *C. sativus*, *Fritillaria imperialis*, *Galanthus nivalis* are best

suited for rock gardens .

Specimen plant:

Dahlia variables was observed to be suitable for growing as specimen plants.

Pots:

Flowering pots add charm and beauty to landscape design. Among forty-eight bulbous plants, five species (*Crocus chrysanthus*, *Ermurus hemalaicus*, *Iris germanica*, *Iris unguicularis*, *Iris japonica*) were suitable for growing in pots.

Ground covers:

Out of fifty three bulbous plants four plants can serve

as ground covers (*Colchicum luteum*, *Eranthis hycmalis*, *Leucojum aeslirum*, *Ornithogalum umbelalum*).

Conclusion:

The investigation out of 53 bulbous plants, 34 species were having spread upto 15 cm; 3 species between 16-30 cm and 6 species >30 cm.

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