

SEP 24 1981

Longwood Program

POPULAR ANNUALS OF EASTERN
NORTH AMERICA, 1865 - 1914

By

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A thesis submitted to the Faculty of the University
of Delaware in partial fulfillment of the requirements for
the Longwood Program for the degree of Master of Science in
Ornamental Horticulture.

December, 1981

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ACKNOWLEDGEMENTS

I wish to express sincere thanks to the Longwood Program for the opportunity to do this study. I am deeply indebted to those who served on my thesis committee and made substantial improvements upon my initial drafts. Dr. Richard W. Lighty helped me focus my ideas and raise my aspirations, Mr. Harold Bruce used his editorial talents to salvage many ragged sentences, and Ms. Julia F. Davis provided invaluable scholarly advice and much needed encouragement. I acknowledge all the institutions which I visited during the past two years and spent many enjoyable hours exploring their rare book and catalogue collections. To Ms. Dolores Altemus and Mr. Stuart Dick, University of Delaware Library; Ms. Enola Teeter, Longwood Gardens Library; Ms. Mary Lou Wolf, Pennsylvania Horticultural Society Library; and Ms. Elisabeth Woodburn, Booknoll Farm I extend a special thanks for their generous assistance. Lastly, without the genuine assurances of my friends and my husband, Rob Newcomb, I would never have carried this thesis to its completion. For their constant companionship I am truly grateful.

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ABSTRACT

The form and diversity of annual flowers help us to understand the social and technological influences of their times when studied in light of their changing roles in past gardens. The nineteenth century in particular was an age marked by rapid and profound changes in American life, especially in the industrial regions then emerging in eastern North America. All facets of horticulture were swept along by the progressive atmosphere of the era. Fluctuating tastes and styles, dictated by cultural impulses and attitudes, also affected the kinds of plants most commonly used. This thesis examines a selection of annuals as they developed within this historical context from 1865 through 1914.

After addressing in general some of the major characteristics of this era which affected horticultural matters, a chronological approach is utilized to discuss the three distinct periods: 1865-1875, 1876-1893, and 1894-1914. Chapters III and V address each annual individually, first discussing briefly its history in cultivation, and then, in greater depth, its subsequent development through the Victorian and post-Victorian years. The

specific general under consideration are: Abronia, Callistephus (China aster), Celosia (cockscomb), Clarkia, Collinsia (Chinese houses), Eschscholzia (California poppy), Gaillardia, Gilia, Impatiens (balsam), Lathyrus (sweet pea), Petunia, Phlox (Drummond's phlox), Portulaca, Reseda (mignonette), Tagetes (marigold), Tropaeolum (nasturtium), Viola (pansy), and Zinnia. Their development is traced through popular magazines, gardening books, journals, catalogues, and other ephemera. Chapter IV, still within the chronological scheme, focuses on the impact of major public events in generating ideas and trends in the use of flowers. The prominence given annuals in public displays at major exhibits such as Philadelphia's 1876 Centennial and Chicago's 1893 World Columbian Exposition, and the affect of countless fairs, shows, and flower trials popular in the last quarter of the nineteenth century, had an accelerating effect upon the refinement and diversity of many annuals.

The appendices appear in two sections. The first, a collection of four complete lists of annuals offered by seedsmen during the 1830's and 1840's, establishes the nature of catalogues at the beginning of the period under study for comparison with later lists. The second section documents the nature of the changes in each annual through specified intervals of time.

INTRODUCTION

In examining sites which were the gardens of a century or more ago, landscape historians look to the physical remnants for indication of the shape of the past. But annuals, the most ephemeral of ornamental plants, leave no impressions on the historic landscape; no discolored imprints of their decayed roots in the soil; no vegetative regenerations from woody crowns. If escaped flowers persist, reseeding themselves yearly among the weeds, it can be argued that these are descendants which prove their ancestors once existed in cultivation. But these echoes of the past fix neither time nor place. Generations of reversion have most likely taken the flower's present aspect back toward its aboriginal state, before the forms were developed which the late nineteenth-century gardener knew. The dilemma remains. Among the tangible artifacts yielding to the archaeologist's trowel, annuals will remain the most elusive of garden elements.

To write then of annuals over this fifty-year period following the Civil War requires investigation away from the site and into the written documents, lists, cata-

logues, and illustrations which depicted them. Yet, we find the flowers cannot escape the distortions and opinions of another age. It is impossible to lift them from the pages in a pure state. The basic theme of this study, therefore, is the consideration of a small sample of the many annuals available during the late nineteenth century as they were known and liked by the average American -- as they were made "popular."

Annuals prevalent in late nineteenth-century gardens fall naturally into two groups. There were those already "old-time" favorites from the eighteenth century: balsam, China aster, cockscomb, marigold, mignonette and nasturtium. These were highly selected, refined, and commonly associated with a variety of classic gardening styles throughout the nineteenth century. The pansy and sweet pea are special cases in this group. Although both existed demurely in the corners of gardens for some time, they were not seriously considered as ornamentals until vastly improved during the 1800's.

A second category includes the flowers which had been introduced into cultivation during the first half of the century. These newcomers created a different kind of excitement and enthusiasm. During the latter part of the century new and unusual forms and colors of petunia, portu-

laca, and zinnia were rapidly being selected by breeders in Europe and England. Further, the explorations of the western regions of America were revealing wild flowers of great potential for the garden. Flowers such as abronia, California poppy, clarkia, collinsia, Drummond's phlox, gaillardia, and gilia were symbols of discovery, progress, and adventure.

Through the medium of print, all were colorfully depicted in an endless array of new forms, hues, and habits. Within this context, annuals can be regarded as reflections of general cultural impulses, tastes, and trends during an age when "horticultural interest was one of the many side effects of changes in American life and attitudes."¹

The annuals cited above are selected as a representative collection rather than as a definitive list of all the flowers available throughout the period. Each is considered in detail to depict the variety of vogues affecting the development and use of flowers in general.

FOOTNOTE FOR INTRODUCTION

¹Charles van Ravenswaay, A Nineteenth-Century Garden, (New York: Universe Books, 1977), p. 8.

CHAPTER I

AN OVERVIEW OF THE AGE: SOME MAJOR INFLUENCES UPON THE DEVELOPMENT OF HORTICULTURE AND THE SEED INDUSTRY

I. Production and Distribution

The first seed-dealing venture in America was started in Philadelphia by David Landreth in 1784. The Landreth firm was soon followed by companies in other major port cities of the Northeast. Founders of such businesses included Grant Thorburn (New York, 1802), Bernard M'Mahon (Philadelphia, 1806), William Booth (Baltimore, 1810), Joseph Breck (Boston, 1818), Thomas Bridgeman (New York, 1824), Charles Hovey (Boston, 1834), Peter Henderson (Jersey City, 1847), James Vick (Rochester, 1849), T. W. Wood (Richmond, 1879), and many others. Philadelphia remained unquestionably the center of commercial seed production throughout the nineteenth and into the twentieth centuries. By the early 1900's more than a dozen firms co-existed in

the vicinity of Philadelphia. Two which remain thriving operations today are the Robert Buist Company (established in 1828), and the W. Atlee Burpee Company, which began relatively late in 1875.¹

Seedsmen were essentially merchants who centralized supplies from individual raisers and sold to both local firms and the public directly.² Initially, America was dependent upon Europe almost exclusively as a source of flower seed. David Landreth began purchasing seed from the Vilmorin, Andrieux Company of Paris as early as 1795.³ Statements such as "Seeds obtained principally from the best growers of France, Germany and England"⁴ often accompanied catalogue descriptions of flowers. Although this dependency was never fully severed throughout the years prior to World War I, this is not to say that production of a home supply of seed did not exist.

Encouraged by a general move toward independence from European trade and a personal sense of pride in the growth of their establishments, seedsmen strove to raise the quality and quantity of seed production in this country. Furthermore, even though transatlantic steamship voyages, in operation since 1839, shortened passage time to a swift two weeks, it was also believed by some firms that seed "exposed to the injurious influences of a damp atmosphere

during an ocean voyage,"⁵ lost viability. David Landreth, whose company motto extolled the fresh and pure quality of his "American Pedigree Seeds", stated in his catalogue of 1886 his dislike for imported seed:

Foreign seeds at best never have . . . the same vitality and vigor of growth as the hard, dry, ripened American seed, and when the soft, immature crops of Europe are subjected to the damp of an ocean passage, their already diminished vitality falls quite 12-15% additional.⁶

Eventually, the desire for more control over actual production in the field stimulated a healthy competition on both sides of the Atlantic which resulted in higher standards of selection and packaging.

Certain economic factors also stimulated this growing industry. Added governmental duties on imported products created an immense interest in seed growing in America. Books such as Francis Brill's Farm Gardening and Seed Sowing maintained that there was "money in the garden . . . (and) also in the seeds which supply it."⁷ Although the systematic growing of flower seed profited from the experience of noted European growers, successful results in this country had to develop gradually through trial and error methods. According to an article in James Vick's Floral Guide of 1876, it was not until within recent years that "flower seeds were grown in America for the market, and these were of the commonest kinds . . ."⁸ He went on to

state:

. . .all kinds of seeds cannot be grown with profit in any one country. Some sorts are raised best and cheapest in the moist climate of England or Scotland, others are more easily perfected in the south of France; while, on account of some peculiarity of soil or climate, or special skill and experience, others are only to be obtained in perfection from Germany.⁹

Through the investment of time, money, and skill James Vick and others with equal determination were able to raise many varieties which were cheaper and often better than those obtained from Europe. By that year, Vick was growing several acres each of verbenas, petunias, pansies, cockcombs, zinnias, and "a score of other things" in smaller quantities.¹⁰

Individual firms expanded their acreage into outlying areas away from the growing cities, and imported and domestic seed were tested and rogued in these trial grounds. In the process, methods of plant evaluation were devised to compare known cultivars (described then as "varieties") with each years incoming deluge of new introductions. This increasing sophistication within the seed industry greatly affected the development of annuals and other ornamentals.

II. The Industrial Revolution: Growth and Change

It must be stressed that the changes and develop-

ments affecting horticulture were part of a greater force influencing every phase of human life during this period, and that was the impact of industrialization. This revolution in technology migrated to America from England during the early 1800's and produced rapid and fundamental changes which literally transformed nineteenth-century society. Although all areas of horticulture were altered in some way by this surge of growth, the commercial aspect responded most directly and positively to the increasingly specialized systems of production and distribution.

A nationwide transportation system was constructed between 1820 and 1915 which stimulated commercial relationships across the continent. Although roads and canals provided important links, it was the railroad which played the major role in encouraging economic growth by providing cheap and rapid transportation.¹¹

Streamlined packaging was another innovative, labor-saving feature which, in company with low postal rates and the lack of prohibitive interstate restrictions, made it possible for seedsmen to distribute their mail-order products cheaply to all regions of the country.¹²

But, regional subcultures from an earlier age persisted, especially in the South. These vast, internal differences surfaced during the years of secession and Civil

War.¹³ The dominating influence of industrial cities in the Northeast was momentarily interrupted. Sources of northern seed supply came to a halt in most cases such as in April of 1862 when the district court of the Confederate States confiscated the property of a branch of the Landreth Seed Co. in Charleston, South Carolina.¹⁴ Such acts were undoubtedly common instances of southern retaliation against "Yankee ingenuity."

Although the country as a whole was thrown into economic and ideological turmoil, the real effects of the war were most profoundly experienced in the South. Charles M. Hovey, whose Boston based Magazine of Horticulture commonly editorialized on a variety of current issues, commented on the situation in 1865.

. . . to look abroad over the northern section of our country, teeming with luxuriant crops, and busy with every industrial art, it is difficult to believe that a terrible war is devastating any portion of the land, or that mighty battles are almost weekly waged against a rebellious foe. The realization is not felt, away from the scene of action; and with the energy of our people, called forth in this great trial of our nation, we calmly and quietly pursue our avocations, knowing that upon its agricultural and commercial prosperity, rests its principal basis . . .¹⁵

Hovey, never at a loss for words, was constantly rallying the country in a united effort to advance the art of horticulture. One of the positive outcomes in the final resolution of the Civil War which he envisioned was the build-

ing of an original body of literature which would address the real problems and needs of a gardening community in this country. He called for horticultural societies to "encourage the growing taste and zeal for new fruits and flowers . . . "16 without, in his words, "ransacking" the ideas and scientific advancements from abroad. His sentiments echoed the hard-felt need for a sound national identity jeopardized by the divisions of war.

This notion was gradually to become reality during the years of Reconstruction and beyond, at least in horticultural matters. The growing network of transportation systems which made possible a broad distribution of goods, naturally helped to destroy cultural barriers. At the same time, a revolution of equally profound nature was taking a parallel course in penetrating the thoughts and desires of the new mass market. All forms of horticultural literature, from the purely scientific to the strictly popular, were now reaching the public by new methods of communications.¹⁷

III. Communication Systems and the Victorian Culture

Advances in the medium of print greatly affected the nineteenth-century world. The economical manufacture of paper from wood pulp along with the invention of the

steam-powered printing press in 1811¹⁸ and, later, the rotary press in 1875 enhanced the dissemination of printed material.¹⁹ Newspapers, tracts, broadsides, magazines, and books became the major vehicles of communication. Nationwide advertising brought together producer and consumer with a speed previously impossible.²⁰

The telegraph, first successfully operated in 1844, was an even more rapid means of providing long distance communication. By 1858 the first transatlantic exchange of a morse code message was made between President Buchanan and Queen Victoria. This instantaneous coming together of America with England symbolized the sense of Atlantic community made possible through technology and our common language.²¹

In many ways ties with England became even stronger through the nineteenth century. There evolved an atmosphere in which ideas and influences flowed in both directions across the Atlantic.²² Essentially, Britain and America shared a period of history measured by the sixty-four years of Victoria's reign from 1837 to 1901. It was a period during which the new urban society absorbed not only America's rural and small-town societies, little changed since colonial times, but also Britain's premodern, Old World folk culture into a society dominated by cosmopolitan ideas. Victorianism describes a world beyond the rule of a foreign

monarch. The age was characterized by middle-class standards and values; the products of an industrialized and modernized society.²³

The Victorian frame of mind combined an enthusiasm for technology and progress with an intense preoccupation with order and proper values. What distinguished Victorians above all else was their "seriousness," a condition believed to indicate their sense of moral urgency and "need for psychological stability amidst the rapid changes occurring during the nineteenth century."²⁴ As a result, Victorian expression was notoriously didactic. Through the printed media, Victorian writers sought to shape the quality of life. "Art for art's sake," as we know it today, was far from being the principle mode, especially during the mid- or "high" Victorian period from the 1850's through the 1870's.

Biblical rhetoric and moral instruction permeated all levels of popular literature; articles literally preached the virtues of growing flowers. This familiar tone was dispersed throughout extracts such as the following from Thomas Meehan's The Gardener's Monthly of 1872:

Flowers stimulate industry as well as lighten toil. For we must have them. We are cold without them, but to have them requires patient study, patient culture, and untiring determination.²⁵

Not only would one's personal character be uplifted by the occupation of growing flowers but also one's reputation and social image! Subliminal lessons of integrity were taught in the efforts behind tidy arrangements of simple flower beds. And, it was always the best practice to raise only a few plants "of choice character and perfect growth than to have ever so many which are imperfectly developed."²⁶ Most advertising for annuals contained such messages in one form or another.

As a result of higher living standards and widespread literacy, an enormous new audience of middle-class readers were targets for this prescriptive writing. A growing "cult of domesticity" conceived the home as an orderly and secure place where the family could concentrate upon the socialization of the children.²⁷ Books such as Joseph Breck's The Young Florist were written as tools to instruct children and to establish within them "a love of nature and taste for the beautiful that would go with them through life. . . ."²⁸

Along with woman's place in the home, the Victorian image of womanhood also included her role in the planning of her flower garden. In Meehan's "Hints for January" in 1872 he remarked:

It is a very nice winter study for ladies, and

one which in England engages the attention of everyone, from Queen Victoria down, to arrange in winter the beds, and the flowers to fill them, for the summer decorations of the garden . . . This practice has been gradually growing in England for the past 30 years, until now it is the universal winter employment of all ladies of taste; and to this great interest in flower-gardening by the English ladies, is the present high state of the flower-gardening department there to be mainly traced.²⁹

Whether it was the lady of the house handing her plans to her gardener to execute or the country wife instructing her husband to take time to prepare the soil for her flower beds, the literature of the day created a perception of women and their place in the garden to which the seedsmen catered. This image was to go through a number of transitions as the century progressed. Women writers themselves, from Jane Loudon to Gertrude Jekyll, became more influential, even though they were still dominated by their male colleagues. As further chapters will reveal, women played a crucial role in making the connection between the concepts of garden design and the flowers which were available to fulfill their design requirements.

IV. The Pursuit of Knowledge

Finally, the Victorian age fostered a great enthusiasm for the general pursuit of science. New attitudes evolved and, with Charles Darwin's Origin of Species (1858)

and new ideas about change in the biological world, people gradually began to accept the theory that life was in a continuous but understandable state of flux.³⁰

The selection of superior or unusual cultivated varieties had been going on "half unconsciously for centuries . . ." and had resulted in the permanence of many ". . . types or races of cultivated plants."³¹ However, an awareness that this phenomenon was not totally up to chance began with the discovery in the late eighteenth century of the sexual nature of flowers and the process of pollination.³² This knowledge, along with Darwin's concept that "the key is man's power of accumulative selection; nature gives successive variations; man adds them up in certain directions useful to him,"³³ served to extend the powers of cultivators still further.

Ironically, though the basic workings of inheritance were revealed in 1865 when Gregor Mendel delivered his paper "Experiments in Plant Hybridization" before the Natural History Society of Brunn in Czechoslovakia, his discoveries passed unnoticed until 1900, sixteen years after his death.³⁴ Hybridization, therefore, was not generally carried beyond the first generation and the potential for enormous variety in future progeny was discarded. Even so, plant breeding methods were decidedly more "scien-

tific" in the nineteenth century. In this country Luther Burbank would emerge as a renowned plant-breeding "wizard" by the turn of the twentieth century.

Both for the pleasure of the work and for the profit involved, amateur and professional breeders contributed a deluge of novelties yearly to meet the demands of an expanding market and changing fashions.³⁵ Horticultural novelties reaffirmed the need for progress so essential to the Victorian. The increase and diversity of cultivated varieties broadened the limits of horticulture into the future. Liberty Hyde Bailey was one of the most invigorating figures on the American scene during this era. In The Survival of the Unlike, a collection of essays and addresses published in 1896, he recognized the implications behind the popular acceptance and desire for rapid advancements by stating:

This uplift in the common understanding of the science of cultivation, and of the methods of crossing and skillful selection, is extending a powerful accelerating influence upon the variation of cultivated plants. But the most important and abiding evolution is that of the man himself . . .³⁶

Attention to these permeating influences is essential for an understanding of how the times affected the development of annuals and how annuals, in turn, reflected these characteristic features. This was true not only for their specific forms, but also in the manner in which they were popularized. In the broader context, it was a combination of social, cultural, and technological factors as well as improved breeding techniques which both directly and indirectly influenced the development of horticulture.

FOOTNOTES FOR CHAPTER I

¹Leslie R. Hawthorn and Leonard H. Pollard, Ph.D., Vegetable and Flower Seed Production (New York: Blakiston Co., 1954), pp. 22, 32.

²John Harvey, Early Nurserymen (Chichester, Sussex, England: Phillimore and Co., Ltd., 1974), p. 14.

³Burnet Landreth, Jr., "Address before the Poor Richard Club of Philadelphia on the 150th Anniversary of the David Landreth Seed Co." 1934, p. 5. Pennsylvania Collection, Pennsylvania Horticultural Society Library, Philadelphia, PA.

⁴James Vick, Illustrated Catalogue of Seeds (Rochester, NY, 1865), p. 2.

⁵David Landreth, Landreth's Rural Register and Almanac (Philadelphia, 1886), p. 2.

⁶Ibid.

⁷Thomas Meehan, ed., "Books, Catalogues, & C. Review," The Gardener's Monthly and Horticultural Advertiser, June 1872, p. 181.

⁸James Vick, "Vick's Celebrated Flower-Farm," Vick's Floral Guide, no. 2 (Rochester, 1875), p. 63.

⁹Ibid.

¹⁰Ibid.

¹¹Samuel P. Hays, The Response to Industrialism 1885-1914 (Chicago: University of Chicago Press, 1957), p. 6.

¹²Peter Henderson, Practical Floriculture (New York: Peter Henderson Co., 1874), pp. 186-188.

¹³Daniel Walker Howe, "Victorian Culture in America," in Victorian America (Philadelphia: University of Pennsylvania Press, 1976), p. 15.

¹⁴Burnet Landreth, Jr., "Address," p. 6.

¹⁵Charles M. Hovey, ed., "The Progress of Horticulture," The Magazine of Horticulture, January 1865, p. 1.

¹⁶Ibid.

¹⁷Hays, Industrialism, p. 8.

¹⁸Howe, "Victorian Culture," p. 17.

¹⁹Hays, Industrialism, p. 8.

²⁰Ibid.

²¹Howe, "Victorian Culture," p. 3.

²²Ibid., p. 4.

²³Ibid., pp. 9-11.

²⁴Ibid., p. 19.

²⁵Meehan, ed., "Floral Sabbath," Gardener's Monthly, September 1872, p. 269.

²⁶Nathaniel H. Egleston, Villages and Village Life (New York: Harper and Bros., 1878), p. 99.

²⁷Howe, "Victorian Culture," p. 26.

²⁸Egleston, Village Life, p. 97.

²⁹Meehan, "Hints for January," Monthly, January 1872, pp. 1-2.

³⁰Hugo de Vries, Plant Breeding (Chicago: Open Court, 1907), pp. 1-6.

³¹Liberty Hyde Bailey, The Survival of the Unlike (New York: Macmillan Co., 1901), p. 178.

³²Richard Gorer, The Development of Garden Flowers (London: Eyre & Spottiswoode, Ltd., 1970), p. 17.

³³Bailey, Survival of Unlike, p. 178.

³⁴H. F. Roberts, Plant Hybridization Before Mendel (New York: Hafner Pub. Co., 1965), pp. 286-290.

³⁵S. L. Emsweller et al., "Improvement of Flowers by Breeding," Yearbook of Agriculture, 1937 (Washington, D.C.: Government Printing Office, 1937), p. 891.

³⁶Bailey, Survival of Unlike, p. 218.

CHAPTER II

THE ROLE OF CULTIVATION,
COMMERCE, AND TASTE IN
THE DEVELOPMENT
OF ANNUALS

Annuals, as a broad class of plants, can be defined on several levels. In order to determine what they meant to the average nineteenth- and early twentieth-century American interested in cultivating flowers, certain general concepts which evolved during the period must be clarified. This chapter will consider annuals in terms of evolving horticultural classifications, commercial techniques, and garden styles. Such considerations had an affect upon the meaning and use of annuals which has continued to the present.

I. Efforts to Classify Annuals

Annuals . . . blow and die the year they are sown.
(William Cobbett, The American Gardener,
London, 1821, paragraph 334.)

. . . among the choicest flowers scattered over the earth are some whose lives are short. They sprout from seed, grow, flower, produce seed in their turn -- and then die, all within the limits of a single season of our gardening year.

(Alfred C. Hottes, A Little Book of Annuals, New York, 1925.)

True annuals, in the botanical sense, are plants which when germinated in spring will bloom the same summer and ripen their seed by the end of that growing season. For practical and ornamental reasons, the horticultural definition must also take into consideration the quality of a plant's flowering performance. Because many plants can attain full growth and achieve their showiest blossom display during the first season, they are horticulturally termed annuals even though in their native habitat they may actually be biennials or perennials.

Greenhouses, hotbeds, and improved forcing techniques extend the length of the growing season and thus broaden the scope of annuals still further. For this reason plants such as pansies, which are considered here as annuals, can be listed as either annuals, biennials, or perennials. Cultural methods are, in turn, subject to climatic factors in different regions which likewise alter the length of the growing season. Therefore, our definition of cultivated annuals must make allowances for the various conditions under which they may be grown.

In the early 1800's British concepts were used as models in the attempts to create a working definition of annuals for American gardeners. Initially, British methods were essentially alphabetically arranged lists; the method of such early cataloguers as Gerard (1596) and William Lucas (1677).¹ By the second half of the eighteenth century this traditional system had given way to the more sophisticated cultural system of classifying annuals. This method subdivided annuals into hardy, half-hardy, tender, and greenhouse or indoor forcing types. Sometimes a separate section was also made for climbing annuals.² This more precise system for classifying annuals was based on the opinions, observations, and documented cultural practices of successful British propagators.

The following descriptions are an example of each major classification as they appeared in the Flanagan and Nutting Catalogue of 1837.

Hardy Annuals which may be sown in open Borders from the middle of February to the end of April.

Half-Hardy Annuals which should be sown in March, under hand glasses or on a very moderate Hot-Bed, and transplanted into the Border in the middle of April or beginning of May.

Tender Annuals which require more than one Hot-Bed to bring them to perfection, should be sown during the months of February and March.³

These brief instructions were undoubtedly quite sufficient in a country whose reputation for gardening expertise was

well established. Translating this sort of information to suit the American environment was an issue which was often confronted in the literature throughout the nineteenth century. Although the mild and favorable English climate was cyclical in its own way, the British environment in general had few of the same difficulties experienced in this country. This situation was lamented by American garden writers such as Peter Henderson, who blamed seedsmen for not clarifying such problems. His assessment of the situation is evident in the following passage from Gardening for Pleasure:

. . . our seed catalogues are nearly all defective in not giving more specific directions for the culture of annual plants. If the space for the description of form and color were devoted to telling the time and manner of sowing, it would be of far more benefit to the amateur buyer; but nearly all follow the English practice of giving descriptions of varieties only. There the necessity for such information is less, the people being better informed as to flower culture, and the climate is also more congenial for the germination of most seeds.⁴

These remarks held some truth for the many lists issued by seed merchants who were simply interested in transferring imported seed, with imported descriptions, directly to their customers. But, it must be stressed that at that time it was beyond the capabilities of most individual growers and distributors in this country to assemble such information, given the regional variations and lack of centralized data on hardiness and soils. Nevertheless,

many influential seedsmen attempted to offer accurate information on the culture of annuals through garden calendars and floral guides as well as through their catalogues, even though regional biases were unavoidably implicit.

A leader of this movement was Bernard M'Mahon, an Irishman who, after immigrating with his wife to Philadelphia, worked with David Landreth & Company until he was able to establish a successful plant business of his own. M'Mahon is well-known for his correspondences and association with such prominent individuals as Thomas Jefferson and for the role he played with the collections of the Lewis and Clark Expedition. William Darlington made the following statement in reference to M'Mahon's work in a letter dated June 15, 1857:

. . . to him we are mainly indebted, among other favors, for the successful culture and dissemination of the interesting novelties collected by Lewis and Clarke, in their journey to the Pacific.⁵

This letter was printed as part of a "Brief Memoir" in the eleventh edition of M'Mahon's book The American Gardener's Calendar which was published twenty-nine years following his death in 1828.⁶

Since its first publication in 1806 this guide was used as a standard garden reference for many American households. Part of its success was its credibility. M'Mahon

sought always to write from his own gardening experiences in the Philadelphia area instead of "referring to works of foreign countries differing materially in modes of culture from those rendered necessary here by the peculiarities of our climates, soils and situation."⁷

His ambitious undertaking naturally fell short in its application to the entire country. As a standard reference his work was very useful and widely read, but in upper New England and the deep South with vastly differing seasonal conditions, it could be used only as a general guide.

William N. White's Gardening for the South, published in 1858, addressed specific growing conditions in the South although most of its information was adapted from G. W. Johnson's Kitchen Gardening, an English work. Like M'Mahon, White maintained that all of his knowledge was based on experience and observation, but that his reliance on certain English works was acceptable because of great parallels in climate.

Our seasons differ from those of the Northern States, in heat and dryness, as much as the latter do from those of England . . . our climate is much like that of the south of England. Hence, while the calendars of operations, in works prepared for the Northern States, seldom agree with our practice, those in English works are often found to coincide with it . . . but, . . . the long, dry summers, and still milder winters, of this climate, often render necessary a peculiar mode of performing the same.⁸

These "long, dry summers" obviously were a major factor in the geographic distribution of certain flower "crazes" such as the sweet pea phenomenon which lasted from the 1890's through the first decades of the twentieth century and which is considered in depth in Chapter V. Southern seed merchants such as T. W. Wood & Sons of Richmond, Virginia suggested fall planting for this crop and offered their collection of sweet pea cultivars with the following warning:

In the South they have not been received with the same favor as further north, on account of the difficulty to make them bloom well, the hot weather being injurious to their growth. 9

Today, the process of determining the best annuals for a region is less of a gamble than it was a hundred years ago. The classification of hardy, half-hardy, and tender annuals has a more scientific foundation based on maps dividing the country into hardiness zones and charts recording average frost dates. The calendars and guides of the nineteenth century, on the other hand, relied heavily on common sense and trial-and-error methods. The publication of accurate references was an even greater challenge in the more extreme regions. A passage from D. W. Beadle's Canadian Fruit, Flower, and Kitchen Gardener represents the approach taken by sources of this vintage.

We have endeavored to make a selection of those (annuals) that will best repay care

and culture in our Canadian climate. It is useless to grow everything. Not even everything that is pretty is worth the requisite labor, when compared with results just as easily obtained by judicious selection.¹⁰

II Annuals Acquired New Significance in the Trade

It must be remembered that the growing of flowers up until around the middle of the 1800's was considered quite a luxury. When it came to the expenditure of labor "the average American had little time or taste for gardening until well into the nineteenth century, for his country was new and other more practical needs demanded attention."¹¹ This situation permeated the way people thought and affected the way this relatively frivolous pursuit of growing flowers was justified and encouraged in the literature. For example, M'Mahon's directions to sow tender annuals "in February in hot-beds with the cucumbers or melons"¹² implies that flowers took second priority to the growing of food crops. A similar attitude is maintained by William Cobbett, an Englishman who, after living on Long Island for a time, published an interesting collection of observations in The American Gardener. The following excerpt on sweet pea and balsam illustrates this point:

Pea (Sweet) -- sown and cultivated like the common garden pea. They should have some sticks to keep them up.

Balsam -- sow when you sow Melons, 4' apart.

It will blow early in July, and will keep growing and blowing till the frost comes, and then, like a cucumber, it is instantly cut down. I have seen Balsam in Pennsylvania 3' High, with side branches 2' Long.¹³

His comparisons not only evoke vivid images, but also suggest the methods which writers of his time used to communicate with their audiences. In other words, everyone knew what a cucumber looked like after the first hard frost, but a balsam was something not as familiar.

On the other hand, nasturtiums (Tropaeolum majus and T. minus) received quite a bit of attention in garden calendars by reason of their use for food. It is significant, however, that although descriptions of the nasturtium's culinary uses were foremost, the beauty of their flowers was still mentioned. M'Mahon considered the climbing nasturtium "very deserving of culture as well on account of the beauty of its large and numerous orange colored flowers, as their excellence in salads and their use in garnishing dishes."¹⁴ White also mentions the ornamental features of the nasturtium even though his calendar primarily concentrates on agricultural subjects. Tropaeolum majus, he acknowledges, has flowers which are "a rich, brilliant orange and continue all summer . . ." but then adds, "and if not so common, would be thought very beautiful."¹⁵ This final remark almost negates the nasturtium as an ornamental because it was so often found in gardens. However,

by mid-century the nasturtium experienced a major shift in classification as it moved from the vegetable to the flower section and reference to its culinary uses almost disappeared.

Flower seed departments acquired new significance as seedsmen recognized the increased demand and started to compete among themselves. David Landreth, whose early catalogues focused primarily on agricultural seed with only a bare listing of flowers, offered a considerable section of annual flower seed during the latter half of the century. Likewise, James Vick, who was a leader in the movement to create "a taste for the beautiful in gardening, and a true love of flowers, among the people . . . " offered "Annuals and other Plants that Flower the first Season . . . (as) the first and most important section of our Catalogue of Flowers."¹⁶ By the last quarter of the nineteenth century virtually all seed companies followed this trend.

Henderson's 1890 Handbook divides the annuals into two basic categories and describes them as follows:

Hardy Annuals are those which require no artificial aid to enable them to develop, but grow and flower freely in the open air.

Tender Annuals are generally of tropical origin, and should not be sown in the vicinity of New York until the first week in May. Indeed, the best rule for all sections of the country, from Maine to Florida, is not to sow the tender kinds until such time as the farmers begin to plant

Corn, Melons and Cucumbers.¹⁷

Henderson's planting guide suggests the increase in leisure time which a large portion of the population experienced by the end of the century. Whereas M'Mahon made no distinction between those who, of necessity, cultivated flowers among the "cucumbers or melons" when time allowed and those who grew them for their own sake, Henderson indicated quite clearly an urban and suburban clientele distinct from the rural farmer.

Ultimately, the seed trade defined annuals in terms of the middle-class homeowner. In 1898, a Boston seedsman claimed that "Annuals are pre-eminently the flowers of the people. They are easily raised, quick in blooming and inexpensive."¹⁸ This advertising technique, which boasted a product "for the millions," was an essential ingredient in marketing strategies for a wide range of commercial entities beyond the seed industry. It is a trend which still applies to many contemporary seed catalogues.

III. Popularizing the Nomenclature

It is important for modern interpreters to understand the absence of standardized formats for plant names and notations in all types of horticultural literature during this period. The descriptive epithets of cultivated

plants today operate under specific rules stated in the International Code of Nomenclature of Cultivated Plants. This code was formally initiated in 1952 by the International Botanical Congress Committee on Horticultural Nomenclature and Registration at the Thirteenth International Horticultural Congress in London. The code subsequently had minor revisions in 1957, 1960, and 1969. Such rules were designed to achieve a concise and standardized registration of new cultivars through strict adherence to specified regulations. Prior to January 1, 1959 the denotation of new cultivar names did not conform to any set rules.¹⁹

Because there was no system for proper registration of plant names during the nineteenth century, those used by breeders and seedsmen were arbitrarily ascribed and often inaccurately transferred. Catalogues were notoriously inconsistent in the use of botanical names and cultivar epithets in Latin form. In many cases, the name of a flower was its ornamental description in Latin form such as Phlox Drummondii rosea albo-oculata for a pink Drummond's phlox with a white eye or Celosia pyramidalis versicolor foliis atrobruneis for a golden-orange cockscomb with reddish-brown foliage. To add to the confusion, within the same list would be a cockscomb listed simply as Celosia cristata Yellow Dwarf. Such juxtapositions seem odd when taken out of context. However, if the lists of the 1860's through

the 1870's and into the 1880's are compared, the mixtures of Latin and common, or "Fancy," names reveal a gradual transition from Latin to an almost exclusive use of common names.

From a commercial standpoint, this shift created new avenues for marketing. As seedsmen tried to reach a broader audience, the arbitrarily used and carelessly spelled Latin names became cumbersome, perplexing items in their catalogues. Eventually, the many novelties entering the market yearly, with their attention-catching, "Fancy" names, competed with the established cultivated varieties.

The chances for new cultivars to occur with greater frequency improved as sophisticated breeders consistently grew large quantities of a single type under highly fertile conditions. As Bailey observed in The Survival of the Unlike, this situation especially "encouraged" mutations in annuals.

These changes are most rapid in plants of shortest duration, or those in which there has been the greatest number of generations, showing that the greater the opportunity for renewal of stock the greater is the variation and number of recorded varieties.

. . . I have shown . . . that varieties do not wear out; but all plants which are habitually propagated by seeds, as garden vegetables and flowers, tend constantly to change or differ from their parents, and finally to pass so far away from them that they receive new names. . . 20

Therefore, with the increased number of novelties, which resulted from more concentrated and systematic breeding programs, use of common names became a necessity not only for more compelling advertising but also because the Latinate names were no longer practical. Seedsmen and breeders drew from a richer source of descriptive possibilities as they popularized the names of their latest selections. Naturally, problems resulted as seedsmen renamed cultivars either unintentionally or for their own commercial gain. Such practices ultimately created the need for the International Code of Nomenclature.

But, the cultivar names themselves, including Victoria aster, Quaker City mignonette, Glasgow Prize cockcomb, and Crystal Palace Gem nasturtium, reflected significant events, places, and individuals of the last half of the nineteenth century. Today cultivars can often be found which resemble the descriptions of older forms, but most of the "period" names, or names ascribed during specific periods, are lost.

IV. Annuals as Elements of Garden Style

In America, as elsewhere, "flower gardens went through many permutations brought about by changing fads and fancies"²¹ during the nineteenth century. Some of these major trends directly affected the popularity of annuals and regulated to some degree their use in the garden. The decorative manner in which annuals were used, therefore, creates an added and perhaps more significant dimension to their meaning.

In Colonial gardens, where function dominated form, there were few opportunities to imitate the well-established gardening styles in Europe and Britain. However, as leisure time increased by the mid-nineteenth century, Americans were more receptive to changing styles from abroad. It was during that time that the knot gardens, parterres and shrubberies of the eighteenth and early nineteenth centuries, which depended heavily upon hardy herbaceous plants to provide structure and form to their design, were replaced by what John Claudius Loudon referred to as the "changeable flower garden."²² This new fashion relied on large reserves of plants which could be "plunged in the borders as wanted."²³ The designs that these beds represented were the result of "bedding out" plants to resemble carpets, mosaics, or ribbons. The essence of this

grand style is use of bold color and uniform habit of growth to achieve a floral display. In 1859 Robert Thompson of the Royal Horticultural Society described the evolution of this style as follows:

. . . formerly the beds and borders of flower gardens presented a poor display compared with what they generally do at the present time. Of good annuals there were few, and the bedding-out system was little known or practiced . . . About the year 1830 a change began to take place. The hardy herbaceous perennials were, to a great extent, dispensed with, and the beds were completely covered with the bloom of annuals.²⁴

Carpet bedding as a phenomenon occurred along with the development of brightly colored cultivars and the technological advances in glass houses which made it possible to grow tender plants indoors in pots. But, did the fancy for these plants develop because they were suddenly available or did they become popular because, as Mariana van Rensselaer argues in Art Out-of-Doors, " . . . public taste had begun to demand bright-colored and stiff material for a special gardening purpose."²⁵ Certain trends in the types and forms of plants used appear to bear out her argument.

Initially, many of the annuals selected for these beds were those recently introduced into cultivation from North America by David Douglas and other plant explorers. England's Jane Loudon writes, in the Ladies Magazine of

Gardening, of sowing in the spring such California annuals as Gilia tricolor, Collinsia sp., and Clarkia sp. Even in England, however, these short-lived flowers required several sowings and were still not durable enough to withstand the summer heat.²⁶ To maintain the broad sweeps of color which this new style demanded, sturdier plants were necessary. In 1861, Thomas Meehan defined in his Monthly Magazine the qualities desired for successful bedding plants as opposed to plants grown for their individual merits.

But, for bedding purposes, a new and striking shade of color, a free blooming character, neat habit of growth, and power to endure a hot, dry sun, are of more importance; and the energies of our improvers should be devoted to this end.²⁷

Annuals exhibiting these features, such as dwarf chrysanthemum-flowered China asters, dwarf balsams, and Tom Thumb nasturtiums were very popular at this time. Eventually, even certain perennial greenhouse plants such as verbenas, coleuses, begonias, and Tom Thumb geraniums became synonymous with the bedding-out system. It seems, then, that Mariana van Rensselaer was right in assuming that the style preceded the plant type and created the market for bedding plants.

Many American garden writers embraced the bedding-out style wholeheartedly and promoted it above all others. Peter Henderson is one example of an extreme devotee. As

a seedsman with "acres of greenhouses" he was hardly disinterested, as a writer, in promoting this style for commercial gain. In his books he consistently maintained that the mixed border of herbaceous perennials, annuals, and shrubs was a "promiscuous" style which could not equal the grand effect "obtained by planting in masses or ribbon lines."²⁸ His ideals were taken from the grounds of London's Crystal Palace and Paris' Jardin des Plantes which he observed in his travels. Moreover, Henderson was a major critic of American public and private flower gardens. In his estimation, the "monotonous" shrubs of New York City's Central Park, so near his own production facilities in New Jersey, could not compare with the floricultural feats in Britain and Ireland.²⁹

Photographic and pictorial evidence of the 1870's and 1880's indicates there were some fine examples of this style in America, but this was primarily confined to a few large private estates and great exhibitions such as the 1876 Centennial in Philadelphia's Fairmont Park. The more modest attempts of the average citizen, were generally seen by American and foreign critics as completely unnoteworthy. In a letter published in Meehan's Monthly of 1861 a French correspondent openly condemned the types of plants Americans preferred in their gardens including "such a worthless flower as petunia . . . (which) looks weedy, has no

shading in its color, no luring perfume, nothing at all to recommend it . . . "30 He concluded that there was a basic difference in attitudes between the French, who gave their gardens first priority, and Americans, who were more interested in the quality of their interior "carpets" than those on the ground.

R. Morris Copeland's Country Life, published in 1859, also points out the inferior quality of American gardens at that time, but the reason cited is more tangible.

A real flower-garden is rarely seen in America, and I do not know of any one which can be at all compared either in style, keeping, or size, with the remarkable gardens of England, where twenty acres have been devoted to the display of annual, perennial, and bedding-out flowers. The cost . . . is enormous.³¹

Ultimately, since fiscal realities determine what methods of gardening are feasible, even with the marked increase in leisure time in nineteenth-century America, the cost of labor and the hours required to execute this type of display were prohibitive. The practice of creating these vivid masses of flowers and foliage, though seductive to the public, was actually "the costliest and most troublesome which can be adopted for the adornment of a garden, either large or small."³²

By the mid-1870's a subtle trend away from this gardening vogue, which highlighted a few plants to the

sacrifice of many, can be detected. Although the bedding system was to retain its supremacy for many more years, the discussion of cultivating flowers for their individual beauty as distinct from "mere massing for effect" filtered into garden literature. In Thomas Meehan's opinion, published in an 1872 edition of his magazine, the re-emergence of hardy plants and the mixed border was a case of history repeating itself and was to be encouraged not only because it gave more pleasure, but also because "it costs less."³³

William Robinson, the renowned British garden writer, was a leader in this movement away from the bedding system. His many books and his monthly magazine, The Garden, relentlessly opposed the "unnatural" beds in England and Europe. Thomas Meehan became an American advocate of Robinson's views, as his book reviews indicate:

Mr. Robinson is the apostle of a new move in the British Garden, and we trust the influence of his good taste will reach America. We have been too long the imitators of the new fangled rush for long arms of mere color; ribbon gardening, . . . has usurped nature; the Englishman was persuaded that unless his eye was blinded by long vistas of scarlet he had no garden at all.³⁴

Today, Robinson's beliefs appear less extreme than they did at the time. Influenced by the native flora of England, which he closely observed during his many trips through the countryside, he proposed that these natural

associations be applied to the flower border. Although he used many bold tropical plants, such as bananas, he intended that they be grown in such a manner as to appear that no human intervention had occurred.

Robinson can be seen as a threat to the use of any annuals in the garden whatsoever, for he was firmly intent upon re-establishing hardy herbaceous plants in the mixed border. However, his attitude was generally favorable toward annuals when their use was in keeping with his concepts. Robinson's ideal of the garden, as opposed to the "wild garden," was the English cottage garden, which permitted a certain artifice, and, of course, annuals to be used. In the chapter on annuals in the 1901 edition of his book The English Flower Garden he recognizes the necessity for them in the following passage:

Whatever we may do with perennials, shrubs, or hardy bulbs, the plants in this class must ever be of great value to the flower-gardener; and among the most pleasant memories of flower-garden things are often those of annual or biennial plants: tall and splendid stocks in a farmhouse garden on a chalky soil, seen on a bright day in early spring; . . . Snapdragons on old garden walls, and bright Marigolds everywhere; . . . Sweet Pea hedges, and Mignonette carpets . . . However rich a garden may be in hardy flowers or bedding plants, it is wise in our climate to depend a good deal upon annuals.³⁵

This nostalgic attitude, with reminiscent perceptions of an earlier, simpler age prior to the industrial revolution,

was manifested in the Arts and Crafts Movement which originated in England with William Morris and the pre-Raphaelites and migrated to America by the end of the nineteenth century. The Colonial Revival Period of the late nineteenth and early twentieth centuries occurred in conjunction with this movement and perpetuated the same attitudes.

Indeed, by the turn of the century the old-fashioned or grandmother's garden came into vogue. Robinson's philosophy was echoed by Thomas Meehan, Charles Sprague Sargent, and Liberty Hyde Bailey among others. They encouraged the cultivation of flowers "for their own sake" either in informal beds or as cut flowers. Reference was often made to sweet pea and zinnia hedges. Annual phloxes, mignonettes, clarkias, China asters, and zinnias were grown in beds described simply as the "reserve" or "slip garden."³⁶

A love of wild flowers ensued which both echoed this nostalgic urge to preserve the country's original aspect and served as a premonition of the negative ecological effects of the industrial revolution. The following excerpt from an article by L. H. Bailey in 1902 suggests this trend.

To most persons the wild flowers are less known than many exotics which have smaller merit, and the extension of cultivation is

constantly tending to annihilate them. Here, then, in the informal flower-border, is an opportunity to rescue them. Then one may sow in freely easy growing annuals, as marigolds, China asters, petunias, and phloxes, and the like . . . such a border half full of weeds is handsomer than the average well-kept geranium-bed, because the weeds enjoy growing and the geraniums do not.³⁷

Although the naturalistic, landscape revival style took supremacy over the formal bedding system, both schools persisted in various forms during this period and have continued to the present. Furthermore, as landscape gardening developed into the professional discipline of landscape architecture, the execution of these styles became more sophisticated and architectonic. In Mariana van Rensselaer's view, the geometrical and the naturalistic styles merged to form the mixed or "composite" style which recognized the merits and limitations of both and used them where they were most appropriate in keeping with the existing features of a place.³⁸ Louise Beebe Wilder interpreted this trend in her own fashion. Although the following passage from Colour in my Garden does not specifically describe a composite style, it does imply the eclectic nature of early twentieth century gardens.

It requires some fortitude in this day to express approval of the bedding-out system. It has departed, or should have, with the days of antimacassars and hand-painted tambourines, and no one wants this period of terrible and useless ornament to return; yet it seems to me that there are times and places where we may

still "bed out" with propriety and even grace.³⁹

Throughout this period Gertrude Jekyll, today considered one of gardening's foremost geniuses, was publishing her works on various aspects of gardening style. In her conversational prose she described artistic techniques in the use of highly selected, but wide ranging collections of plants. She used annuals both discreetly and brazenly; in light touches and great quantities as she saw fit. She was always aware of the flow of a garden and the artistic principles inherent in the eye's need for surprise and rest. She focused simultaneously on the individual flower and its effect in combination with other plants. Above all, she believed it was a gardener's duty to create beautiful pictures.

. . . while delighting our eyes, they should be always training those eyes to a more exalted criticism; to a state of mind and artistic conscience that will not tolerate bad or careless combination or any sort of misuse of plants . . .

It is just in the way it is done that lies the whole difference between commonplace gardening and gardening that may rightly claim to rank as a fine art.⁴⁰

Her influence was especially pronounced upon other women garden writers of her day, including Louise Wilder who made constant reference to "Miss Jekyll's" ideas. Louisa Yeoman King, in The Well-Considered Garden, believed

Jekyll's Colour in the Flower Garden was second in importance only to Bailey's Encyclopaedia for any gardener's library.⁴¹ Color harmony and arrangement became the predominant issue throughout the garden literature of the early twentieth century. Annuals were carefully selected for the visual effect they achieved in the mixed border. Gardens became a personal expression of taste combined with a sensitive interaction with nature.

We can see, then, that annuals weathered the change in gardening ideals during this period, passing from being the favorites of the carpet bedders to respected members of the cottage gardens of Robinson and the floral designs of Jekyll and Wilder. Paradoxically, many of the improvements achieved by the carpet bedding enthusiasts may, in fact, have recommended annuals to opponents of this style. In any case, the significance of annuals in the garden went through a number of transformations depending upon the tastes and styles of the times.

FOOTNOTES FOR CHAPTER II

¹John Harvey, Early Gardening Catalogues (Chichester, Sussex, England: Phillimore and Co., Ltds, 1972), p. 152.

²Ibid.

³Ibid., pp. 127, 129, 131.

⁴Peter Henderson, Gardening for Pleasure (New York: Orange Judd Co., 1891), p. 27.

⁵Bernard M'Mahon, American Gardener's Calendar, 11th ed. (Philadelphia: J. B. Lippincott & Co., 1857), p. vii.

⁶Pennsylvania Horticultural Society, From Seed to Flower (Philadelphia: PHS, 1976), p. 95.

⁷M'Mahon, Calendar, p. 2.

⁸William M. White, Gardening for the South (New York: A. O. Moore, 1858), p. 9.

⁹T. W. Wood & Sons, Seed Growers and Merchants, Catalogue for 1894 (Richmond, VA: 1894).

¹⁰D. W. Beadle, Canadian Fruit, Flower, and Kitchen Gardener (Toronto: James Campbell and Son, 1872), p. 346.

¹¹Charles van Ravenswaay, A Nineteenth-Century Garden (New York: Universe Books, 1977), p. 7.

¹²M'Mahon, Calendar, pp. 169-170.

¹³William Cobbett, The American Gardener (London: C. Clement Printers, 1821), paragraphs 375, 339.

- ¹⁴M'Mahon, Calendar, p. 341.
- ¹⁵White, South, p. 256.
- ¹⁶James Vick, Vick's Floral Guide, 1 (Pochester, 1877), p. 1.
- ¹⁷Peter Henderson, Henderson's Handbook of Plants (New York: Peter Henderson and Co., 1881), p. 24.
- ¹⁸R. & J. Farquhar, seedsmen, Gardening in a Nut-shell (Boston, 1898).
- ¹⁹J. S. L. Gilmour et al., eds., International Code of Nomenclature of Cultivated Plants (Utrecht, Netherlands: International Bureau for Plant Taxonomy and Nomenclature, 1969), p. 8.
- ²⁰Liberty Hyde Bailey, The Survival of the Unlike (New York: The Macmillan Co., 1901), p. 358.
- ²¹Ravenswaay, Nineteenth-Century Garden, p. 8.
- ²²Geoffrey Taylor, The Victorian Flower Garden (Essex, Great Britain: Anchor Press, Ltd., 1952), p. 73.
- ²³Ibid.
- ²⁴Ibid., p. 74.
- ²⁵Mariana Griswold van Rensselaer, Art Out-of-Doors (New York: Charles Scribner's Sons, 1925), p. 141.
- ²⁶Jane Loudon, "Sowing Annuals," Ladies Magazine of Gardening, January 1842, p. 106.
- ²⁷Thomas Meehan, ed., "Hints for May," The Gardener's Monthly, May 1861, p. 129.
- ²⁸Peter Henderson, Practical Floriculture (New York: Orange Judd Co., 1869), p. 26.

²⁹Ibid.

³⁰Meehan, ed., "Letter from Paris Correspondent," Monthly, July 1861, p. 223.

³¹R. Morris Copeland, Country Life: A Handbook of Agriculture, Horticulture, and Landscape Gardening (Boston: John P. Jewett and Co., 1859), p. 547.

³²Rensselaer, Art, p. 142.

³³Meehan, ed., "Hints for March," Monthly, March 1872, p. 1.

³⁴Meehan, ed., "Hints for November," Monthly, November, p. 1.

³⁵William Robinson, The English Flower Garden, 7th ed., (London: John Murray, 1901), p. 111.

³⁶William Robinson, ed., "Flower Garden Notes," The Garden, 39 (January 31, 1891): 95-96.

³⁷Liberty Hyde Bailey, "Use of Wild Flowers in Cultivation," The House Beautiful, June 1902, p. 51.

³⁸Rensselaer, Art, p. 160.

³⁹Louise Beebe Wilder, Colour in my Garden (New York: Doubleday, Page & Company, 1918), p. 287.

⁴⁰Gertrude Jekyll, Colour in the Flower Garden (London: Country Life; Ltd., 1908), p. vi.

⁴¹Louisa Yeoman King, The Well-Considered Garden (New York: Charles Scribner's Sons, 1915), p. 221.

CHAPTER III

THE HISTORY AND DEVELOPMENT OF A SELECTION OF ANNUALS, 1865 - 1875

Prior to the Civil War, most seed catalogues were merely lists offering a limited selection of flowers. The number of cultivars available was generally scant, although this would vary depending upon the emphasis of the particular company. Landreth's of Philadelphia, for example, was at that time primarily interested in vegetable seed and apicultural products. It was not until the 1870's that their flower seed department expanded.

In Appendix I are examples of four lists of the 1830's and 1840's: David Landreth's (1832), George C. Thorburn's in New York City (1838), Flanagan & Nutting's in London (1835), and Joseph Breck in Boston (1845). These lists are included mainly for contrast with the catalogues issued later, but it is also interesting to note the similarities and differences among them. The Flanagan &

Nutting list, which divided annuals into hardy, half-hardy, and tender categories, is, by far, the most thoroughly classified. In general, the American lists were less sophisticated as evidenced by the Thorburn list which relegated annuals to one section and the Breck and Landreth lists which simply alphabetized their entire selection of flowers by genus.

It is also interesting to note how quickly some of the new introductions were available commercially in England and America. Both Flanagan & Nutting and Thorburn offered Clarkia and Gilia spp. which had just been introduced into cultivation within the decade. Other plants on the Flanagan & Nutting list from the David Douglas introductions of the late 1820's included Collinsia and Eschscholzia spp. Breck's list indicates that these species were standard items by the mid-1840's.

By mid-century, catalogues offered greater numbers of cultivars, although the numbers may be misleading in many cases. The differences between cultivars listed in the various seed catalogues are often not clear and could easily be duplicates of one another. In Appendix II, some of the cultivars with multiple names are indicated.

This chapter considers a selection of annuals in-

dividually, beginning with those longest in cultivation and continuing through those introduced during the early nineteenth century. Each section will include a brief historical sketch of the annual in cultivation as well as its status within the seed industry from 1865 through 1875.

During this ten year period Victorian influence was at its height. With regard to flowers, this taste was evident in an intense interest in double-flowered annuals with compact habit which could be used as bedding plants. Dwarf China asters, balsams, and cockscombs were used in this style. The more refined and formal forms of chrysanthemums, dahlias, roses, and camellias were very fashionable and the double flowers of such annuals as China asters, balsams, zinnias, portulacas, and clarkias were often compared to them. Other general trends in the development of annuals during this period included enlargement of the flower and refinement of growth habit.

I. Old-Time Favorites Through Early Nineteenth-Century Introductions

This section covers eleven general of cultivated annuals which are not native to North America. By the mid-1800's these annuals were well known to commerce and were available in a number of cultivated varieties. Their past use associated them with a variety of garden styles,

from carpet beds, parterres, and knot gardens to informal mixed borders. The genera longest in cultivation begin this sequence.

Nasturtium

There are two species of the common garden nasturtium; both are natives of South America. The first to be introduced into Europe was Tropaeolum minus, which was brought by Spanish settlers in the fifteenth century. This species bears small yellow flowers splashed with a dark orange spot; each of the five petals terminates in a prominent point and the upper one forms a nectar spur. Jean Robin, gardener to the King of France, obtained seed around 1580 and John Gerard, in his Herball, writes that he in turn had received seed from "my loving friend, Jean Robin."¹ It was known as the yellow larkspur to Parkinson who noted that it was "familier in most gardens of any curiosity"² by the beginning of the seventeenth century.

It was not until the late 1600's that the more vigorous T. majus was introduced. Because of its climbing habit, it quickly became popular in cottage gardens trained against old apple trees or across rustic arches and stone walls. As mentioned in Chapter II, the most popular use of this plant was the pickling of the seeds and flower buds

in vinegar as a condiment with meat. The leaves were also used in salads like watercress.

A third species which reached Britain from Peru around 1750 is the canary-flowered nasturtium, T. canariensis (referred to now as T. peregrinum). This annual climber with deeply-lobed leaves and bright yellow flowers with fringed upper petals was strictly an ornamental and was not commonly sold in America until mid-nineteenth century.³

Both T. majus and T. minus were introduced by Bernard M'Mahon in 1806 and were quickly transported across the continent by the early settlers. The common orange-scarlet form was probably most familiar to Americans at that time. The two species cross readily and breeding experiments in England led to the development of the Tom Thumb cultivars by the 1850's.⁴ More brilliantly colored forms, including a dark ruby red, were discovered in the wild by such British plant hunters as Thomas Lobb. These new colors were bred into the bushy Tom Thumb cultivars and were on the market by 1857.⁵

The King of Tom Thumb nasturtium was quite well known by the 1860's and Charles Hovey writes in The Magazine of Horticulture for 1864 that he imported seeds of this scarlet flower with brilliant dark foliage from the seed farm of Messrs. Carter and Co., near London.⁶ Crystal

Palace Gem, with sulphur yellow flowers spotted with maroon, was another of particular note in this series.

Although the Tom Thumbs did not supersede the climbing nasturtiums, they were quite popular. Probably the most significant reason for their success was their dwarf, bushy habit which adapted them for use in carpet bedding. Added to this series of compact plants with bright flowers in the yellow to red range was the introduction of a form with variegated foliage in the early 1870's. This nasturtium was also recommended for use in ribbon and pattern beds.⁷

Cockscomb

A pan-tropical flower long in cultivation, the cockscomb was introduced into Europe around 1570, probably from Asia. The earliest form introduced was the dark red Celosia cristata which Hortus Third describes as a tetraploid cultigen resembling the wild type, C. argentea, with enlarged crested, plumed, or feathered spikes. Paxton's Dictionary of 1868 lists C. cristata and varieties compacta and elata (red forms) and variety flavescens (yellow) as 1570 introductions.⁸

Today's classifications combine the crested, plumed, and feathered sorts under one species, C. cristata, with a number of sub-groups such as the Childsii, Nana,

Spicata, and Plumosa.⁹ Through the nineteenth century, however, these cultivated races were treated as distinct species. By the mid-1800's three species were generally recognized in the trade, namely C. cristata (with crested flower spikes), C. pyramidalis (with pyramids of feathery spikes), and C. spicata (with layers of plumed spikes); each species composed of several cultivars.

The cockscomb is well documented in colonial gardens and was most likely fancied for its peculiar appearance and shock of color in a time when gardens had few exotic ornamentals. In Europe there was a great interest in growing cockscombs in pots for floral exhibitions and table decorations, but, in America, they were generally treated as plants for the open ground throughout the nineteenth century.¹⁰ Nevertheless, American advertisements for the various sorts of cockscombs were often accompanied with instructions on pot culture.

Often, the message was that cockscombs performed better in the gardens of this country than in Britain. In Charles Hovey's opinion,

Such, undoubtedly, is the reason why the magnificent Celosia, now under notice, has not come to us with testimonials of its beauty. The Iresine and the Coleus were the cynosure of all amateurs abroad before they reached us, yet in real decorative effect they can neither compare with the Celosia.¹¹

This was likewise the conclusion made by James Vick who remarked when offering the new Japanese Cockscomb in 1873 that it "seems to like the American climate and soil."¹² Customer reactions were mixed on this matter and one letter to Vick bitterly complained:

The seed you sent me for Japanese Cockscomb produced common things, with pale green leaves, and a coars top-knot of a brick-dust color, as like your picture as a Shanghai rooster is like a hummingbird.¹³

Correspondence or testimonials were common items in nineteenth-century catalogues. Letters from the customers can still be found in modern catalogues, but it is interesting to note that, at that time, complaints were printed along with praise.

Cockscombs have always had a controversial appeal; favored by some, despised by others. During the height of the bedding -out craze, they were generally deemed worthy components in ribbon designs. Furthermore, they were seen as desirable substitutes for some of the more difficult to grow plants in the carpet beds in Britain and elsewhere.

Marigolds: African, French, and Signet

Although native to Mexico and Central America, the African and French marigolds acquired their common names from the circuitous routes they took before reaching England. Both Tagetes erecta (African) and T. patula (French) are believed to have reached Spain by the early sixteenth century. The French marigold, known then as the Rose of the Indies, was introduced into England in 1573 by Huguenot refugees. The African marigold, it is thought, became naturalized along the North African coast before its introduction into France in 1535. At this time the Emperor Charles V sought to free Tunis from the Moors and, therefore, this species took its name in allusion to this event.¹⁴

Both species were used by the French in their elaborately designed parterres or, more accurately, knot gardens and Parkinson wrote that T. erecta ". . . is the grace and and glory of a garden in the time of his beauty . . ."¹⁵ By the eighteenth century T. patula had attained the distinction of being a florist's flower and a favorite with exhibitors.¹⁶

The first marigolds cultivated in this country were calendulas or pot marigolds, Calendula officinalis.

True species of Tagetes were available by 1806 at the latest, when M'Mahon offered double African, double French, and quilled African marigolds.¹⁷ By the mid-1800's both species were offered in a number of distinct cultivars for general use in the garden. The greatest objection to marigolds at that time was their disagreeable fragrance, which rendered them "useless in hand bouquets."¹⁸

The marigold most prized for bedding purposes during the 1860's was a new species introduced in 1825. The signet marigold, T. signata (now called T. tenuifolia), with its dwarf habit and dense mass of blossoms was well suited for carpet bedding. The Pumila group, which was initially developed in the early 1860's, included various cultivars of extremely compact habit. It was advertised as ". . . a most beautiful plant . . . from 12 to 18 inches in height . . . as round as a ball. The flowers are single, bright yellow, marked with brown . . . We have counted a thousand on a plant."¹⁹ This exaggeration is technically legitimate because the marigold is a member of the Compositae, but the average customer was probably unduly impressed by such accounts of its floriferous nature.

Garden Balsam

Native to India, Malaya, and China, the garden

balsam, Impatiens balsamina, was introduced into Europe in 1596. By the eighteenth and early nineteenth centuries the balsam was well known in American gardens and is mentioned in the lists of Peter Collinson, Thomas Jefferson, Bernard M'Mahon and others.²⁰ Mixed colors and double blossoms were available at that time and are also on the Thorburn and the Flanagan & Nutting lists (see Appendix I).

The double forms were divided into three groups according to their markings. The camellia-flowered types came in mixed colors spotted with white, the rose-flowered were perfectly double and in solid colors, and the carnation-flowered were striped.²¹ The literature is confused as to the origin of these forms: some sources attribute the camellia-flowered to German breeders and others to French. Still other sources suggest that there is no difference between the camellia and the rose-flowered sorts; that actually the French called them camellia- and the Germans called them rose-flowered.

In any case, these three basic groups were generally accepted in the catalogues of the 1860's and 1870's. Dwarf forms were also available for each group and were recommended for borders and edging. A popular method of growing balsams during this period was to pinch the side branches in such a way that the flowers were not concealed

by the leaves. When the more refined balsams were grown in this manner, such as the popular novelty Solferino (a carnation-flowered type with white blossoms covered with narrow broken stripes and fine spots of red), the entire plant looked like a fine bouquet.

Mignonette

Known as the fragrant weed of Egypt, this plant can be traced to the Roman occupation of North Africa when, it is thought, seed was sent back to Italy from the Adriatic coast. Pliny called it resedare, meaning "to assuage" or "to heal," for its use as a sedative and a cure for many disorders.²² Its Latin name, Reseda odorata, derives from Pliny, but the common name is French, meaning "little darling," and refers to its general use during the eighteenth century to perfume the city streets of Paris and "obliterate the offensive odours."²³ The plant was introduced into England in 1752 when Philip Miller of the Botanic Gardens at Chelsea received seed shortly before publishing his Gardener's Dictionary. It was grown as a pot plant both in France and England during the early nineteenth century and it was not until the mid-1800's that the mignonette became a standard garden flower.²⁴

Naturally, the mignonette would never have found

a place in the colorful carpet beds. D. W. Beadle accurately described it as an ". . . unpretending flower, with scarce coloring enough to distinguish the blossoms from the leaves. . ."²⁵ The mignonette was grown solely for its wonderfully sweet fragrance, described by some as like the smell of fresh strawberries or raspberries. Forms with larger flower spikes and tinted red or lilac were on the market by the 1860's, but as a result of this stringent selection for a single characteristic, these forms tended to lose the fragrance, and eventually lost favor. Parson's New White and The Prize were two "novelties" of this period.

The literature indicates that mignonette was ubiquitous in Europe and England during the nineteenth century, grown by the wealthy as well as the lower classes. Mignonette was also propagated on a large scale by the florist industry as a popular plant for cutting. But, although its reputation was carried over to America, there is some question as to how widely it was actually cultivated in this country. James Vick, who considered this annual to be "essential in every garden,"²⁶ remarked in 1875 ". . .the Sweet Mignonette. . .every one knows and everybody loves, and yet very few cultivate. . ."²⁷ Whether or not this was the situation is difficult if not impossible

to determine. The fact that mignonette seed was always available in the trade during this time suggests that there was at least a moderate demand.

China Aster

One annual whose development and use are well documented on both sides of the Atlantic is the China aster, Callistephus chinensis (previously C. hortensis). Because its appearance suggests an aster, early botanists considered it as such (i.e. Aster sinensis and A. chinensis) after it was first received at the Jardin des Plantes and at Chelsea in the early 1730's. The original plant was discovered by a Jesuit missionary, Pierre d'Incarville, in a field near Peking. It was a single form, with two to four rows of purple ray florets and numerous yellow disk florets.²⁸

By 1750 blue, white, red, and purple forms were used to "adorn courtyards and parlours" from Scotland to the Rhine.²⁹ Double forms were developed in France and reached England in 1752. During the first half of the nineteenth century Germany became the center of seed production and breeding, especially with quilled types. In fact, Germans so dominated the field that when Callistephus was introduced commercially in America by M'Mahon it was

known as German aster.³⁰

China asters were considered indispensable in parterres and carpet beds as well as in the mixed border, intermingled with early spring flowers or among woody and herbaceous plants. In 1863 James Vick remarked,

No class of flowers has been so much improved within the past twenty years as this splendid genus, and none has advanced so rapidly in popular favor. They are now as double as the Chrysanthemum or the Dahlia, and almost as large and showy as the Peony, and constitute the principle adornment of our gardens during the autumn months.³¹

Like the garden balsam, China aster was divided into several groups according to habit and flower form. The following indicates the major types although some catalogues recognized even more.

Truffaut's Peonia-flowered Perfection: a large-flowered variety, having long reflexed petals,* and in various colors. The flower stalks grow about two feet high.

New Rose: grows to about the same height, the flowers are very double, of several colors, and the petals finely imbricated.

Peonia-flowered Globe: a very early flowering variety, the blossoms are large, of various colors, and the plant of a stout branching habit.

Dwarf-Chrysanthemum-flowered: grows about a foot high, the flowers are large, finely formed, of various colors.

Dwarf Pyramidal Bouquet: producing a great profusion of flowers. The colors are various, and the plant only about a foot high.³²

*"petals" are actually florets of a composite flower.

Some of the most frequently encountered cultivars of this period were Imbrique Pompon (a globe type with imbricated florets), Cocardeau (a combination of quilled and flat florets), Hedge-Hog (quilled), and New Victoria (pyramidal).³³

Pansy

Before the second decade of the nineteenth century, the flower known as pansy was but the wild heartsease or Viola tricolor, a native to Britain's meadowlands and hedgerows and today commonly called Johnny-jump-up. Little was done to improve these small, richly colored flowers until 1814 when two gardeners, working at different country estates and totally unaware of each other, began selecting and breeding the wild heartsease almost simultaneously.

Roy Genders gives one of the more accurate accounts of this story in his book Collecting Antique Plants. William Richardson, who worked in the garden of Lady Bennett at Walton-on-Thames, began selectively breeding the flower following the advice of a Hammersmith nurseryman who recognized some notable wild forms on the estate. The second gardener in this scenario was William Thompson who worked less than ten miles away for Lord Gambier, at Iver in Buckinghamshire. He, too, sought to improve upon a

number of forms of the wild species. What is significant is that both gardeners had apparently obtained an all-blue viola from outside sources which they used in their crosses. The combination of the characteristics in these two flowers resulted in numerous refined forms of Viola tricolor.³⁴

One of Thompson's first seedlings sported this blue coloring and was illustrated in The Floricultural Cabinet for May, 1835. It was a bright yellow, broad "faced" flower distinctively edged with sky blue which he named Beauty of Iver. Four years later, Thompson again discovered an unusual pansy, this time by chance as he was walking among a patch of long neglected heather. This stray seedling, the first blotched pansy, was named Thompson's Medora.³⁵

The tremendous interest in blotched pansies which ensued led to the founding of the Hammersmith Heartsease Society in 1841 and the Scottish Pansy Society four years later. Amateur breeders across Britain began working with the plant and criteria for Show pansies were soon developed. The Societies defined the Show pansy as a flower with a circular bloom ". . .with a white or cream ground or band to the lower petals (the center portion being covered by a large blotch), the two upper petals being of the same colour as the ground."³⁶ The Show pansy was later to be

divided into two sub-groups: the margined (bi-colors) and the self colored.

What is known as the Fancy pansy developed in Belgium and quickly displaced other pansies in its appeal to the public. In the Fancy pansy there is no restriction as to color. By definition,

The blotch, of violet or chocolate colour should almost cover the whole of the three lower petals with the exception of a wide margin which may be of any colour or of more than one colour. The top petals need not be the same colour as that of the margin of the lower petals and may be rose, cream, gold, purple or intermediate shades. The eye should be bright yellow and clearly defined.³⁷

The growing of pansies in this manner by amateur florists and professional breeders was definitely a British and European phenomenon. In America, however, pansies were exhibited at state fairs and horticultural shows and seedsmen often took such opportunities to display plants raised from their latest shipment of imported seed.

Foreign seed was widely available on the American market and was often sold with detailed instructions for fall and early spring sowing. The distinction between Show and Fancy pansies was rarely articulated and, from the descriptions of the cultivars, it is difficult to determine if those offered in America would be considered premium

forms by pansy connoisseurs. Some of the self-colored forms like King of the Blacks, Cliveden Purple, and White were probably of Show pansy stock. Others were more varied and mottled in color such as Marbled Purple, Odier, and Striped & Mottled. Vick attributes their origin to Germany but does not indicate whether they are truly Fancy forms.³⁸

Sweet Pea

Franciscus Cupani, an Italian monk and amateur botanist, was the first to introduce the sweet pea from the wild into England in 1699 when he sent seed from Sicily to Dr. Uvedale, a schoolmaster at Enfield Grammar School. The weedy looking plant produced small flowers borne in pairs on short stems. The original flower had purple to reddish-purple standards (upper petals) and light bluish-purple wings.^{39,40} Its sweet fragrance was its most distinguishing aspect, evoking its Latin name Lathyrus odoratus.

Robert Furber, "gardiner at Kensington," and others offered sweet peas for sale by 1730. A few years later three distinct forms were known, a purple, a white, and a popular reddish-pink and white bi-colored flower known as Painted Lady which had a particularly sweet fragrance. By 1793 scarlet and black-purple forms were added and in 1817 a striped cultivar appeared on the lists. It

was not until 1850 that the first sign of selection for size rather than color occurred in "A New Large and Dark Purple" cultivar offered in England by the Messrs. Noble, Cooper, and Bolton firm.⁴¹

The James Carter firm, outside of London, was first to offer Blue Hybrid in 1860. This was a white-flowered cultivar with a well-defined blue edge and is considered the forerunner of the picotee types. Its fine qualities were achieved through selective breeding. Blue Hybrid was highly regarded and received a Royal Horticultural Society First Class Certificate in August 1883.⁴²

The next sweet pea to appear (and the first to actually receive recognition from the Royal Horticultural Society in 1865) was Scarlet Invincible. It was first distributed in England in 1866 and was available in America by 1870 at the latest. James Vick took a special interest in sweet peas and kept abreast of all the new introductions from England. He was probably one of the first to introduce Blue Hybrid and Scarlet Invincible into the American trade. Peter Henderson's firm in New York was another which offered Scarlet Invincible along with Striped, Painted Lady, Purple, and White in the early 1870's.⁴³

At that time, sweet peas were not commonly seen in American gardens. They were sold to be grown for a garden hedge or screen, supported by common pea sticks, and for cutting for bouquets. Vick tried to "encourage the general culture of this sweet flower" by offering large papers (or packages) at low prices and by the pound and ounce at about cost.⁴⁴ It is interesting to note that this offer was made in 1873, the same year of a financial panic in America. Advertisements which emphasized seed as an economical investment reflected a general concern for the worth of the dollar.

Zinnia

Ornamentally, the zinnia did not have a lot in its favor when introduced in 1796. The wild type, referred to as "medicine hat" by seedsmen, is composed of a single outer row of scarlet ray florets and central cone of dark brown disk florets. This form persists in nearly all races of modern zinnias and a few generally appear in any large planting.⁴⁵ During the early nineteenth century, the coarse habit and plain scarlet and crimson blossoms of Zinnia elegans competed poorly with other more showy flowers.

It was not until the mid-1800's that the first

double forms appeared. M. Vilmorin of Paris received seed in 1859 from M. Grazan, gardener at Bagnères. The plants bore flowers whose central disk florets had developed into showier ligulate or ray flowers, similar to those of the dahlia. He offered the seed in 1861 and Thomas Meehan, upon receiving them, reported in the January edition of his monthly magazine that "more than 50% will come double. . . all colors--from rose to violet amaranth."⁴⁶ Meehan's Nurseries exhibited the double zinnia in the fall of that year, but he admitted in the September issue that, of the seeds sent to him "from 'head quarters,' about two thirds came single. This is to be expected from this class of double flowers."⁴⁷ Enthusiasm for the double zinnia was still high despite the poor performance of early forms. Meehan himself advised people to "save seed from the doublest and most luxuriant flowers."⁴⁸

Progress was swift and, in 1864, Charles Hovey wrote the following account in The Magazine of Horticulture:

The zinnia is still improving under the hands of skillful cultivators. The first irregularly double blossoms are now brought to as symmetrical a form as the double dahlia, and the original crimson colored variety is sporting into shades of purple, scarlet, orange, and salmon. It is surprising to see how much has been made of this old and neglected plant. But these few changes are only the beginning of what is to follow; for there is no reason to suppose it will not in time give us as great a variety as the dahlia.⁴⁹

Around this time, M. Vilmorin introduced a new species of zinnia which had been discovered in Mexico by M. Ghiesbriht. Originally listed as Z. Ghiesbrihtii, the species was variously known as Z. mexicana, Z. angustifolia, and its current name, Z. Haageana. It was described as differing from Z. elegans "in color, as well as in general habit. . .its bushy habit, abundant bloom, and bright golden hue, giving it the highest claims as a garden ornamental."⁵⁰ By 1872 a double form was introduced by Messrs. Haage and Schmidt, of Erfurt, France called Z. Haageana Flore-Pleno. It was considered one of the best novelties of that season and quite suitable as a bedding plant for late summer.⁵¹

Portulaca

This fleshy, trailing annual of the hot and sandy plains of Brazil was introduced into cultivation around 1827. The small flowers were variously colored in the white, orange, and red range much as they are today. Portulaca's early popularity was not very significant until, like the zinnia, double forms began to appear. By the mid-1860's, double portulacas were commonly available at up to five times the cost of the single sorts. The "extravagant" price for a carpet of these miniature rose-like flowers was defended by seedsmen because seed of the double forms was

so sparingly produced. However, buying the double types was always risky as Charles Hovey pointed out in 1864.

The double varieties, like all other double flowers, cannot be relied upon with certainty to produce all double flowers, but the larger part of them will be double, and the single sorts may be pulled up and thrown away or transplanted, unless it is desired to retain them in the same bed with the double kinds.⁵²

Portulacas were primarily used for carpeting the ground during the summer months. Indeed, portulaca was viewed as a brilliant, freely blooming annual with limitations. In 1875 Joseph Breck observed that,

. . .no flower exceeds it in the brilliancy of its coloring when opened by the morning sun, and it continues in bloom most of the season; it is good for nothing, only on its bed, being worthless for a bouquet, or other ornamental purposes when cut.⁵³

At that time portulacas were sold in separate colors of scarlet, crimson, white, buff, variegated, and yellow. Presumably, these were all of the species Portulaca grandiflora. However, Vick listed a number of cultivars of P. alba and P. thellussonii (listed in Paxton's Botanical Dictionary of 1868 as a variety of P. grandiflora). Vick's list of distinct species closely parallels those recognized by Paxton in his Dictionary as originating from South America in the 1820's and 1830's.⁵⁴

Petunia

In 1823 a plant with dull, white blossoms, which at night gave off a strong fragrance, was discovered on the banks of the La Plata in South America. Dried specimens were sent to France where the botanist Antoine de Jussieu constructed the genus Petunia and named the plant Petunia nyctaginiflora (presently P. axillaris). It was soon joined by a second species with purple blossoms from Buenos Aires. For a time this plant was erroneously called Salpiglossis integrifolia and was first illustrated in the Botanical Magazine of 1831 under this name after flowering in the Glasgow Botanical Garden. Eventually, John Lindley correctly classified it in the genus Petunia and named it P. violacea.⁵⁵

The common garden petunia, P. × hybrida, was soon derived from the hybridization of the two South American species. As early as 1837 new cultigens were depicted in colored plates in the Botanical Magazine. The flowers varied not only in color, variegation, and size but also in form. Deeply fringed blossoms appeared and by the mid-1840's the first semi-double forms were described.⁵⁶

Initially, double petunias created quite a sensation. They were produced through a laborious process of

hand collecting the pollen from double blossoms, which have anthers but no pistils, and transferring the pollen to the pistils, or female parts, of single flowers which were emasculated. The double form was quite rare and unpredictable, which enhanced its value. However, double petunias were soon found to be of little use except for pots and for cutting. In 1866 Joseph Breck stated that "the double petunias were once the rage, but now, fine, improved single varieties are considered superior."⁵⁷ It was recognized at that time that the smaller flowering, multiflora types were best for bedding.

By 1875 petunias were divided into three classes: double forms, grandiflora forms -- including fringed types (produced in a manner similar to the double petunias), and small-flowered, floriferous forms. Each class had a number of cultivars. A few of the more successful bedding cultivars included: Countess of Ellsmere (dark rose with white throat); Kermesina (white with crimson throat); and Inimitable (white with a red margin), all of which were single-flowered, floriferous forms.

II. Early Nineteenth-Century Introductions Native to the United States

The remaining seven annuals are treated as a group

distinct from those previously discussed in this chapter. Their introduction dates alone do not set them apart, for the first cultivation of petunias, portulacas, zinnias, and even pansies was also of that period. The difference lies in the public attitude toward and acceptance of these annuals both in this country and abroad.

English garden writers generally thought of them as the "California annuals" (referring to abronias, clarkias, collinsias, gilies, and California poppies) and highly recommended their use in the mixed border. Literature in this country further emphasized the origins of these wild flowers, and often catalogue descriptions included seedsmen's personal accounts of travels through the West where they encountered these flowers in the wild.

Finally, although they are flowers of this continent, major environmental differences affected the adaptability of some plants to the eastern United States. As this and further chapters will indicate, these flowers met with varying degrees of success as garden annuals. Some adapted easily while others languished and were eventually eliminated from the trade.

Abronia or Sand Verbena

Two species of abronia, Abronia umbellata and

A. arenaria (now A. latifolia), generally led the lists of annuals of the mid-1860's. Both are perennial, trailing plants of the California coast where they grow vigorously in regions where few plants survive. In 1868 Charles Hovey observed that "The abronias are considered charming plants, not unlike the verbenas, with corymbs or heads of sweet scented flowers. . ." ⁵⁸ These two species and occasionally a third, A. fragrans (white with a vanilla fragrance) were the extent of the selection of abronias available during this period.

In their native habitat, the yellow A. arenaria and the rosy-lilac A. umbellata were seen as more robust versions of verbena and were advertised accordingly. The following description typifies those of the early 1870's.

The Abronias are native of California, and in their natural home make a beautiful flowery carpet. The yellow variety, arenaria, delights in the most barren sand hills, and on the borders of the Pacific Ocean, within a few feet of high water, with no other sign of vegetation around, we have seen the clean white sand hills made most brilliant by this pretty plant, which is known on the coast of California as the Sand-Plant. The seed does not always germinate freely, and the plants in some sections do not seem to grow with their native vigor.⁵⁹

Such depictions became interesting accounts of the Pacific Coast at that time. Narrative travelogues were popular as Americans recalled the adventure of the great

movement westward when the country was barely explored and, in this regard, the plants were merely a medium for a sketch of another region. In any case, the glowing account served to overshadow the unavoidable fact in the last sentence. Their difficult to germinate seeds made abronias almost impossible to grow in areas outside their native habitat.

Clarkia

Named for Captain Clark of the Lewis and Clark Expedition, clarkias are plants of the Pacific Coast as well as the Rocky Mountains. By the 1860's two species were recognized in gardens: Clarkia elegans which has triangular shaped, lavender-pink petals with long, slender basal claws and C. pulchella with smaller, bright pink to lavender petals which are lobed.

Meehan reported a "New Double White Clarkia Elegans" offered by Vilmorins in 1861. Unlike petunias, these flowers were not so double as to render them sterile, and were therefore not as difficult to reproduce from seed. Many cultivars of both single and double forms were offered by the 1870's in both species.⁶⁰

The English were again more successful with this flower, according to much of the literature at that time.

Accounts of London exhibitions in which clarkias received First Class Certificates appeared in American magazines of the 1860's. Vick wrote enviously of ". . .immense fields ablaze with bright colors, acres each of pink, red, white, purple, lilac. . ."⁶¹ which he encountered in a country village of Essex. Although, like most seedsmen, he offered a broad selection of cultivars, he readily admitted that ". . .the Clarkia is the most effective annual in the hands of the English florist. It suffers with us in hot dry weather."⁶²

Collinsia or Chinese Houses

Zaccheus Collins, a Philadelphia botanist, was honored by this plant when it was introduced from northern California in 1826. Collinsia bicolor (presently C. heterophylla), a member of the Scrophulariaceae, has small, irregular flowers with violet or rose-purple lower lobes and white upper lobes.

Seedsmen offered as separate species several types other than the original species by the 1860's. These forms would probably be considered cultivars today. Joseph Breck offered several forms which are not currently recognized, including: C. multicolor (crimson, lilac, and white) and two varieties of this type, marmorata (white and

rose marbled) and bartsiaefolia (purple lilac). Another species sold by Breck in 1868, C. grandiflora (white and lilac) is still recognized, however.⁶³

The following excerpt from Vick's 1875 Floral Guide again suggests the California landscape:

The Collinsia is a very pretty, free blooming, hardy annual, that we always liked, but never so well as since we saw it growing wild in California, and which we mistook when at a distance for some new species of Lupin. The marbled, or many-colored, flowers are in whorls of five or six blossoms, and three or more of these whorls on each flower stem. The upper lip of the flowers is white or pale lilac, and the lower one dark purple. About 18" in height.⁶⁴

Gilia

It is noteworthy that gillias were on seed lists so quickly after their introduction in 1833. Thorburn offered Gilia capitata and G. alba by 1838 and G. tricolor appeared in early lists as well. The clusters of delicate flowers are borne on freely branching plants of up to three feet high. G. tricolor, with fragrant, lilac or violet lobed flowers marked with purple and with a yellowish to white tube, was the most popular for gardens.

The English exported seed back to the United States and marketed them primarily as plants for small masses or for cutting. Although highly esteemed in Britain

by such garden experts as Jane Loudon, gillias never received a great deal of attention in the American trade.

Gaillardia

Blanket flower is the common name for this native whose range extends from coastal Virginia to Florida, west to New Mexico and Mexico and north to Colorado, Nebraska, and Missouri.⁶⁵ The plant was named for Gaillard de Morentonneau, a French botanist, and the original garden form, Gaillardia picta (presently G. pulchella var. picta) was discovered in Louisiana in 1833.⁶⁶

In America, gaillardias were generally considered good bedding annuals. Their strong, free blooming flowers met the carpet-bedding criteria for constant bloom throughout the summer's heat and humidity; the plants themselves are vigorous and spreading. The quality of the flower was not so refined as that of such long-time favorites as China asters; however, Vick noted that although "the plants are somewhat coarse, and the flowers by no means delicate. . . a good bed of Gaillardia will bring no discredit upon the taste of the cultivator."⁶⁷

By 1875 a double-flowering cultivar, probably similar to var. Lorenziana with all its florets converted to tubular disk florets, was particularly interesting.

California Poppy

The early Spanish explorers sailing back and forth along the California coast noted the flame of the poppies upon the hillsides coming down to the sea, and called the coast the Land of Fire. . . Later, when the Russian expedition of 1815, under Kotzebue, sailed northward exploring the coast, the countless millions of golden cups again won the notice and admiration of the visitors, and Chamisso, the naturalist of the expedition, in reporting the plant, gave it the name of the surgeon of the expedition, Eschscholz, and Eschscholtzia [sic.] it remains.⁶⁸

Abrams Illustrated Flora of the Pacific States confirms this expedition as responsible for the original collections along the coast of San Francisco and Eschscholtzia californica was described by Chamisso as a glaucous-leaved, yellow-flowered plant found along the coast.⁶⁹

In its native habitat, the California poppy exhibits a wide variation in characteristics of habit and flower. Some are considered ecological while others are inherent.⁷⁰ This situation obviously accounted for great diversity under cultivation for, by the 1860's, there were many cultivars available and sold by the seedsmen as distinct species.

Joseph Breck's catalogue of 1868 listed five species of Eschscholtzia: E. compacta (yellow and orange), E. crocea (rich orange), E. alba (creamy white), E. tenui-

folia (primrose with orange center and dark yellow petals) and, in 1870, E. aurantiaca (deep orange, German introduction). All of these forms are currently listed as cultivars of E. californica in Hortus Third except for E. tenuifolia which is now E. caespitosa, a distinct species of Central to southern California.

Drummond's Phlox

Naturalist Thomas Drummond discovered this plant on the second of his explorations of North America during the late 1820's and early 1830's. Though plagued by violent boils and fevers, he continued to send letters and botanical and zoological specimens to Sir William J. Hooker in Glasgow. Drummond never returned, but in the last shipment of his belongings, sent in February 1835, were seeds of this annual phlox which Hooker planted in the Botanical Garden in Glasgow. His description of the plant appeared in Curtis' Botanical Magazine of October 1835:

3441 Phlox Drummondii Mr. Drummond's Phlox.
Class & Order Pentandria Nonogynia (Nat. Order Polemoniaceae)

Seeds sent over in the early part of the year 1835 soon vegetated; the plants blossomed most copiously and with equal profusion and brilliancy of colour, whether in the greenhouse or in the open border; and it bids fair to be a great ornament to the gardens of our country. Hence, and as it is an undescribed species, I am desirous that it should bear the name and serve as a frequent memento of its unfortunate discoverer.⁷¹

This Texas annual became equally as popular in eastern North America as far north as Canada. In Beadle's Canadian Fruit, Flower, and Kitchen Gardener of 1872 a large section was devoted to the attributes and uses of Drummond's phlox.

They vie with the Verbena in variety and intensity of coloring, and to be fully enjoyed should be grown in masses of distinct colors. . . . But, planted in any way, whether in separate masses of color, or in ribbons of distinct and various colors, or with all colors indiscriminately mingled, it is one of the loveliest flowers of the garden.⁷²

By this time Phlox drummondii was available in a great variety of colors. These forms were already well established since the 1860's. Violet Queen was considered one of the largest annual phloxes grown in 1868. By 1874 the Grandiflora types were issued as a new class of unusual size. Rather than having the white eye and violet edge of Violet Queen, this form had a large, dark violet eye. This class soon developed many additional cultivars with conspicuous eyes of varying colors.

Of the North American annuals, Drummond's phlox was the most useful for the carpet or ribbon bedding style. The many colors available, including white, crimson, scarlet, purple, red, rose, pink, lilac, and violet, were clear and brilliant. Furthermore, the plants grew uniformly and were fairly dependable.

FOOTNOTES FOR CHAPTER III

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¹³Vick, Floral Guide, no. 1, 1877, p. 23.

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- ³²Beadle, Canadian Garden, pp. 346-347.
- ³³Vick, Floral Guide for 1874, no. 1 (Rochester, 1874), pp. 33-36.
- ³⁴Genders, Cottage Garden, pp. 238-239.
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⁴⁹Hovey, "Floricultural Notes," Horticulture, January 1864, p. 10.

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CHAPTER IV

THE IMPACT OF PUBLIC EVENTS, 1876 - 1893

Some consideration must be given to exhibitions which, like the media of catalogues, books, and magazines, exposed the American public to new plants and styles of gardening. Using the flower shows of Great Britain and Europe as models, American plant societies, garden clubs, commercial firms, individual plant enthusiasts, and even civic organizations organized horticultural events on local, national, and international levels, especially during the last quarter of the nineteenth century.

The scope of this chapter is bound by two major events in the United States: the 1876 Centennial Exposition in Philadelphia and the 1893 World's Columbian Exposition in Chicago. Both cities' impressive Horticultural Halls were erected side by side with numerous other buildings, which exhibited the state of the arts and of industry, to form a collective statement of great achievements. These were international exhibitions and, therefore, were not only the culmination of what was perceived by this country

as worldwide progress, but also the inspiration for new ideas and directions in society.

Horticultural displays at such events were elaborate. They portrayed a type of gardening well beyond the means of the majority of middle-class visitors. However, these events are important as symbolic models for the countless smaller horticultural shows which cropped-up across rural and urban America. This chapter begins with an examination of the floral displays and exhibits at the Centennial and Columbian Expositions and concludes with an evaluation of the effect that ongoing shows and trials had on the fundamental development of garden annuals.

I. Major Exhibitions: 1876 Centennial and
 1898 World Columbian Exposition

By the last quarter of the nineteenth century major international expositions were no longer novel, even in America. Expositions had been staged in London in 1851 and 1862, New York in 1853, Amsterdam in 1865 (where flowers such as tulips, dahlias, and roses were featured), and Paris in 1867. However, the 1876 Centennial was unprecedented because it combined a national celebration with an international exhibition and, thus, it identified ". . . the Independence and History of America with the Industrial

Art and Progress of the World."¹

Within the conservatory of Horticultural Hall in Fairmont Park were exotic orchids, flowering shrubs, palms, ferns, and other tropical plants. Garden annuals here were few according to the Catalogue of Tender Plants Grown at Horticultural Hall which lists only Impatiens balsamina and Petunia violacea varieties.² In several rooms leading to the main hall, however, were exhibits of flower seeds, flower stands, gardening tools, and other paraphernalia.³ This, undoubtedly, served as display and market place for the prominent seed houses. As the Official Catalogue of the United States International Exhibition indicates, individual seedsmen also exhibited a variety of plants in competition such as ferns, bulbs, bedding plants, and annuals.⁴

Surrounding Horticultural Hall were ". . . thirty-five acres of ground, which extend westward over the Belmont road as far as the Catholic Fountain, and which are gay with flowers from all parts of the world."⁵ Included in this display was a sunken garden which contained "beds of flowers, arranged with regard to the pattern and colors in imitation of a carpet."⁶ It displayed to the world a perfect example of Victorian taste in gardening at that time. Interestingly, these beds contained none of the common bedding annuals considered in this research. Instead,

the beds were composed of "circular plots and straight borders and rings of abutilon [A. hybridum], coleus [C. blumei], and achyranthus [Iresine lindenii] . . . like so many masses of piles velvet."⁷ The only other plants in these beds, according to The Centennial Record, were dusty miller (Centaurea cineraria), golden feverfew, (Chrysanthemum parthenium), and scarlet and pink geraniums (Pelargonium × hortorum cultivars), although other sources include alternanthera (A. ficoidea), stevia (Piqueria trinervia), verbena (V. hybrida), croton (Codiaeum variegatum), and other tropical plants.⁸

These carpets of colorful foliage and flowers resisted the extreme heat and dryness of that summer in 1876 and demonstrated the ultimate perfection of the style. The resilient nature of the plants provided the standard for breeders determined to produce plants for this purpose. To this day, the execution of carpet bedding still aims to achieve the quality displayed in Horticultural Hall's sunken garden. It was one of the best major examples of this style in this country for the remainder of the Victorian era.

Certain non-horticultural aspects of the Centennial's theme itself were in sharp contrast to the ideals that carpet bedding and mechanized gardening represented, however, and should not be ignored. The 1876 Exhibition

appealed to a growing nationalistic spirit in this country, which idealized America's colonial past, and brought this trend to new heights. Many contemporary historians attribute the beginnings of the Colonial Revival Movement to the outstanding popularity of the "New England Kitchen of 1776" along with exhibits of reproduction furniture and artifacts of the eighteenth century. This trend in the decorative arts would eventually encompass gardening styles as the century progressed.

But in the 1876 floral displays at Horticultural Hall this was not apparent, although the idea of reestablishing the native environment was vaguely alluded to in a collection of "all the representative trees of this country."⁹

Through the Centennial, the public was directly exposed to new standards and possibilities in gardening as in the other arts and sciences. The juxtaposition of nostalgic and progressive elements actually reflected a recognized tension of the times. Eclectic tastes emerged which ultimately influenced the use and development of garden annuals.

Seventeen years later, Chicago's World Columbian Exposition, like the Centennial, featured an elaborate horticultural exhibition. Displays within Horticultural

Hall emphasized the development and sophistication of the American seed industry. Actual operations of seed houses were shown, including methods of burnishing and packing seeds for retail trade, methods of testing seed vitality, and methods for growing seeds. One of the more unusual exhibits was a display of vegetables and flowers grown in different latitudes.¹⁰

Many prominent seedsmen participated in the trials for bedding plants and flowering annuals, including Peter Henderson, W. Atlee Burpee, James Vick and Sons (James Vick senior had died in 1882), and David Landreth. Aside from general exhibits of flower seed, they also featured pansies and lawn.¹¹ Foreign participants included Vilmorin-Andrieux & Co. who exhibited calendulas, marigolds, gaillardias, snapdragons, California poppies, and other flowers in beds along the building.¹²

Certain displays, however, were quite different in nature from the Centennial. The focal point of Chicago's floral display was the "wooded island" which the following advertisement describes:

Fruits and Flowers at the Fair: The 'wooded island' -- more properly named the flowery island, will be one of the most beautiful and attractive spots at the Exhibitions . . . There will be acres and acres of flowers of brightest and most varied hues and pleasing perfumes. Little groves of trees, clumps of shrubbery and sinuous walks will relieve this floral display.¹³

This man-made paradise surrounded by water, although still highly contrived, was less formal in emphasis than Fairmont Park's carpet beds in 1876. The descriptions suggest the island was intended to represent a naturalistic treatment of flowers on a grand, public scale.

An even more significant departure from the Victorian artifice at the Centennial was the creation of a naturalistic lagoon which an article in an 1893 edition of Garden and Forest magazine described.

. . . an improvised bit of Nature . . .
rare exotics have not been used, but mainly
native plants collected in neighboring woods,
fields and swamps. The main object was to
secure a massive green effect with cheap home
material . . .¹⁴

Native plants featured in this setting included willows, iris, red-osier dogwood, elder, sumac, wild verbena, wild sunflowers, bidens, coreopsis, goldenrod, and others.¹⁵

The presence of such displays at a major and heavily attended exposition undoubtedly propagated the concept of naturalistic gardening over vast geographic and cultural barriers. As for garden annuals, these new ideas and modes of gardening affected the use of even the most highly refined, carpet-bedding forms. In Chapter V we will follow in greater detail the changing status of a selection of annuals as they rose or fell in popularity as a result of shifting tastes.

II. Flower Shows and Trials

Whereas the Centennial and Columbian Expositions demonstrated the extremes of horticultural technique and development, events on a lesser scale also featured flowers for public appraisal. Numerous plant societies and organizations conducted shows and trials of some form almost yearly and, in so doing, furthered the development of cultivated plants, including annuals. Accounts of exhibits at state and county fairs and at such organizations as the Massachusetts, Pennsylvania, and New York Horticultural Societies were written in seed catalogues and guides as well as in the societies' journals. Here the emphasis was less on styles of gardening and more on the improvement of the actual plants. Commercial acceptance was conferred on annuals receiving awards at these competitions which were modeled on the highest award at that time, the prestigious Royal Horticultural Society's Certificate of Merit. Because the All-America Selections was not established until 1932, this was the standard for eastern North America as well as Great Britain.

Some of the prominent annuals of the 1880's recognized by horticultural societies include the following:

Empress of India Nasturtium

In W. Atlee Burpee's catalogue of 1884 is quoted the following excerpt from The Gardener's Magazine (no date given):

The flowers of this grand novelty are of a brilliant crimson color, and so freely produced that no other annual in cultivation can approach it in effectiveness, and it would be perfectly safe to describe it as the most important annual in recent introduction.¹⁶

This new cultivar was as highly esteemed as Carter's Crystal Palace Gem of the 1860's and '70's. In 1887 it received the Royal Horticultural Society (R.H.S.) First Class Certificate.

Sheppard's Prize and Trimardeau Giant Pansies

In 1886, Joseph Breck entered a number of newly introduced pansy cultivars in the Massachusetts Horticultural Society's trials. His entries included many of the recently developed French hybrids attributed to three pansy specialists: Bugnot, Cassier, and Trimardeau.¹⁷ These pansies had tremendous blossoms in mixed colors, differing dramatically from the English Show and Fancy pansies. Cassier's Superb, Roemer's Superb Giant Prize, Belgian Blotched, Bugnot's French, Victoria Red, Trimardeau Giant, Sheppard's Prize, and Breck's International Prize were entered. The award "for the best 50 blooms and also the best six plants in pots"¹⁸ went to Sheppard's Prize and Trimardeau Giant.

New Plumed Celosia

Burpee advertised this new cockscomb as the "Triumph of 1889 Paris Exhibition."¹⁹ It was considered an improved cockscomb with bronze foliage and fiery blossoms. Glasgow Prize Celosia, imported in the mid-1880's, was another improved sort with enormous crested, scarlet blossoms.

Eckford and Laxton Sweet Peas

Since Scarlet Invincible was awarded a First Class Certificate in 1865, the R.H.S. began to take particular interest in sweet peas. Some of the most outstanding introductions of the 1880's and early 1890's were those of Henry Eckford of Shropshire, England. He began work on sweet peas in 1876 and by the 1890's dozens of cultivars in the American trade could be traced to him.²⁰ Thomas Laxton of Bedford, England began to work with sweet peas around 1877 as well.²¹ Their work, along with the efforts of British seed firms such as Messrs. J. Carter and Co., resulted in an extensive variety of sweet peas which began to enter the American trade by the 1880's.

Joseph Breck's firm in Boston was one of the first to feature these new introductions. A few First Class Certificate winners which he advertised included:

Invincible Carmine: R.H.S. award winner for 1886; large, intense crimson-carmine flowers.

Orange Prince: R.H.S. winner for 1887; with a bright orange pink standard flushed with scarlet, and bright rose wings veined with pink.

Princess of Wales: R.H.S. award winner for 1886; flowers shaded and striped with mauve on a white ground.²²

Award winning status given to such selections was undoubtedly a selling point by the 1880's. Seedsmen took full advantage of the desire thus stimulated in the public in their lists of novelties.

Additional cultivars of the annuals detailed in Chapter III which were introduced during the period from 1876 through 1893 are documented in Appendix II.

FOOTNOTES FOR CHAPTER IV

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³George Stinson, ed., The Centennial Record, June 1876, pp. 3-4.

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¹¹Ibid., pp. 17, 19, 21, 23.

¹²Charles S. Sargent, ed., Garden and Forest, July 5, 1893, p. 289.

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¹⁶W. Atlee Burpee, Burpee's Garden, Farm & Flower Seeds (Philadelphia, 1884).

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CHAPTER V
DEVELOPMENT OF ANNUALS DURING THE
POST-VICTORIAN YEARS,
1894 - 1914

The character of seed catalogues and popular gardening magazines changed dramatically as the nineteenth century progressed to its conclusion. Vividly colored lithographs and fine-lined drawings of mid-century gradually gave way to black and white photographs which were far inferior. However, the photographs did present the scale and habit of the plants more realistically than the stylized drawings, in which it was difficult to distinguish the blossoms of zinnias from dahlias and balsams from roses.

The tone of the catalogues also changed. By the 1880's seedsmen, obviously eager to produce their own lines of flower seed, offered named cultivars such as Vick's Branching China Aster, Fordhook Fancy Poppies, and Emily Henderson Sweet Peas. By the 1890's this trend began to assume a more assertive quality with the emergence of the series of "Defiance" flower seeds which al-

luded to American resistance to foreign grown seed. The W. Atlee Burpee Company was a leader in this approach, but other firms such as Thorburn's, Landreth's, and Breck's also offered Defiance Balsams, Defiance Pansies, Defiance Largest Flowering Petunias, Allen's Defiance Mignonette, and Breck's Defiance Zinnias. These, accompanied by American flags and other patriotic insignias, were mild manifestations of the nationalistic atmosphere which characterized the period.

As Part IV of Chapter II suggests, this nationalistic trend also took on a nostalgic tone as Americans idealized the colonial past. Grandmother's gardens became the vogue, based on the English cottage garden concepts initiated by William Robinson. Prominent figures in American horticulture from Thomas Meehan to Liberty Hyde Bailey and Charles Sprague Sargent promoted this desire for a less complicated age and for the simple, old-fashioned gardens where color and fragrance mingled with abandon. They reacted against progress and modern notions which seemed to discard past values and experiences. Perhaps, they felt, in the garden such changes could be arrested, if only temporarily.

The ideals of gardening and the use of annuals underwent yet another shift from the previous decades,

especially through the works of women writers who followed Gertrude Jekyll's ideas. The use of color in the garden was a common preoccupation and color nuances were crucial topics in gardening books and early twentieth-century editions of periodicals such as Country Life in America, House Beautiful, House and Gardens and many others. Seed catalogues, answering this need for the right colors in design, took great pains to separate sweet peas, Drummond's phlox, China asters, zinnias, portulacas, and pansies carefully into color categories.

Annuals were used in ways differing from those of the Victorian era, but not in entirely new and revolutionary ways. What was different, however, was the vastly enlarged selection of plants available by the beginning of the twentieth century. This final discussion of a selection of annuals from 1894 through 1914 considers the relationship between these more refined plants and the popular gardening ideas.

China Asters

August is the month of China Asters. I find many people are shy of these capital plants, perhaps because the mixtures, such as are commonly grown, contain rather harsh and discordant colours; also perhaps because a good many of the kinds, having been purposely dwarfed in order to fit them for pot-

culture and bedding, are too stiff to look pretty in general gardening. Such kinds will always have their uses, but what is wanted now in the best gardening is more freedom of habit.
(Gertrude Jekyll, Colour in the Flower Garden, 1908)

Thus, Gertrude Jekyll pronounced a new attitude toward the well-known China aster. She enticed the critics of carpet bedding to use these plants in different ways by devoting an entire section of her own garden to a selection of pure violet-purple and lavender China asters. For her, it was merely a matter of choosing the right types which she selected from the "Comet, Ostrich Plume, and Victoria classes--all plants with long-stalked bloom and a rather free habit of growth."¹

William Robinson likewise preferred China asters in the flat or reflexed classes; however, he chose from these groups the more medium-sized forms such as the White Mignon (introduced around 1890) and Hedge Hog. The very large flowered China asters such as Paeony and Victoria, he felt, had a tendency to become coarse or show open centers. These fine lines of taste reflected the author's personal views and should be evaluated with this in mind. However, a general dislike for the dwarf, carpet bedding sorts was clearly evident during this period. Robinson felt that the dwarf types looked ". . .very well for the

short time they are in bloom, but their dumpy habit of growth fits them chiefly for pot work."² This attitude, if not so bluntly put, was at least insinuated in The House Beautiful in 1902 when the dwarf Triumph asters were recommended because, "The flowers are borne freely and openly, so that the plant as a whole is full of grace notwithstanding its diminutive size."³

This preference for China asters with a freer habit was also apparent in American periodicals such as an article in a 1912 edition of The Garden Magazine which considered the "flat rayed" forms to be the only ones worth growing. This division included the Globe asters (catalogued as Truffaut's, Peony-flowered Perfection, Semple, tall Triumph, and other late-flowering, branching types) and the flat or reflexed group (catalogued as Washington, Mignon, Victoria, Queen of the Market, Crown, and Comet types).⁴ The majority of improved forms introduced during this time fell into these groups, which included Semple and Vick's Branching asters developed by American breeders.

The popularity of China asters would, in the next decade, be threatened not by a shift in tastes, but by the devastating effects of two diseases: wilt, caused by a soil- and seed-borne fungus of the genus Fusarium,

and yellows, a virus spread by a species of leafhopper.⁵ These problems were evident during the first decade of the twentieth century and mentioned in catalogues and periodicals. J. M. Thorburn's 1905 seed catalogue suggested that the disease (presumably wilt) was caused by manures which were too fresh or used in too large quantities. His remedy was to stir fresh wood ashes or unslaked lime into the soil.⁶ The 1912 article in The Garden Magazine cited earlier also addressed these diseases. Apparently, the problems were not considered serious enough to abandon the cultivation of China asters altogether but their only solution was "attention to proper cultural methods."⁷ The seed industry was yet to be plagued with the consequences of growing single crops repeatedly in the same soil. The challenge of developing disease resistant strains of China asters remained for the breeders of the 1920's and '30's.⁸

Nasturtium

Both the tall and dwarf forms of nasturtiums were popular in catalogues through 1914, although Lobb's and canary-flowered nasturtiums appeared to decline in importance and some firms discontinued them. An exception was the J. M. Thorburn firm which offered an extensive list of Tropaeolum lobbianum cultivars during the early

twentieth century. The problem in analyzing these lists is that some of the forms cited as Lobb's nasturtiums were listed in other catalogues as tall or climbing nasturtiums (T. majus). Such confusion was not new in the trade, but was a particular problem with the several species of nasturtium.

Improvements in nasturtiums were generally in the areas of color and size of the flower. Of the numerous cultivars which entered the market, Ida Bennett cited Sunlight and Moonlight as the finest cultivars introduced in years. She described them as clear golden yellow without markings and pale cream showing wine-colored markings respectively.⁹ David Landreth offered these as part of a new strain of nasturtiums from California with "beautiful giant flowers (and) . . . a great range of color, including Sunlight, Moonlight, Twilight, Butterfly and all the California Giants."¹⁰ He sold them as a collection called Landreth's Giants.

Color intensity was a recurring theme in the trade descriptions of nasturtium cultivars. Some of the more popular novelties were forms with variegated leaves or mottled flowers. Inevitably, a bizzarre combination of these unusual aspects was offered by Thorburn's as a Variegated-leaved Queen of Tom Thumb Chameleon, the flowers

were said to be of many colors on the same plant.

With the revival of old-fashioned gardens, the climbing nasturtiums were again appreciated for informal use such as trailing over fences, trellises, and stone walls. Mention of their culinary uses also returned in some catalogues. Landreth's 1914 catalogue concluded its page-long list of nasturtiums with the following notice:

We call the attention of table epicures to Nasturtium sandwiches, the effect being most novel, and to the palate most delicious, both green leaves and flowers being used.¹¹

Mignonette

Like nasturtium, mignonette was also a favorite in mixed borders. Landreth's sold it as a plant for all situations, ". . . in a box or pot on the window in some narrow, pent-up alley, or in the open ground in the summer."¹² Successive sowings were always recommended in order to provide flowers throughout the season and pot plants over the winter.

Many improved strains were available during this period, including florists' forms such as Allen's Defiance and Machet. However, many felt this effort on the part of the breeders was useless. Gertrude Jekyll, who shared this belief, made the following remarks about mignonette

in Annuals and Biennials:

The beauty and true charm of Mignonette lie in its sweet sent and modesty of colouring--the sweetest scented of all is the cheapest sort sold by weight. Where there are so many flowers of brilliant colouring for the adornment of our gardens we may well leave Mignonette alone with its own modest colour and incomparable sweetness. For these reasons the kind called Mile's Spiral is one of the best for the colour is little altered, and it has a fine spike and excellent scent.¹³

Harriet Keeler echoed these sentiments in Our Garden Flowers where she concluded that "Enlarging the spikes has not always improved the odor. . .the old garden form, with its light, sweet, pleasant fragrance, holds its own fairly among the fifty improved varieties offered by the trade."¹⁴

Pansy

Enlargement of the flower continued to be the aim of pansy fanciers. The French strains, developed in the 1880's, were quite popular, and improved forms of Trimardeau, Odier, and Bugnot's Superb appeared regularly. Unlike the Show and Fancy pansies, these strains came in a variety of markings -- self-colored, blotched, or mottled. The Odier, Cassier's Giant Odier, and Masterpiece were "five-spotted" sorts with enormous flowers.

Joseph Breck offered some of the better forms and claimed his seeds were grown under contract "by

persons who give special attention to their particular pet strain."¹⁵ Mr. Bugnot, himself, was said to have grown the Bugnot's Private Strain and Bugnot's Blotched which Breck offered. Dependence upon European production continued through 1914; however, nearly every seed firm under this study offered at least one selection of their own strain. These included Burpee's Defiance, Landreth's Philadelphia, Thorburn's Superb, and Breck's Boston Prize which was advertised as "an American strain. . .superior to any European mixture."¹⁶

Pansies were commonly treated as flowers for the spring to be discarded and replaced by summer bedding annuals. For more informal gardens, however, garden writers suggested growing pansies in shady areas all summer.

Petunia

The tendency now-a-days with most subjects is to get the flowers as large as possible, and the Petunia is no exception to the rule; indeed, it is one in which this character is strongly marked, for the huge lumpy blossoms composed of a mass of flimsy petals are totally wanting in any pleasing feature, while out of doors they are easily spoilt by wind and wet. A pinch of seed will frequently yield plants which are for all ordinary purposes greatly superior to many of the named varieties, whose size is often their only claim to recognition. (William Robinson, The Garden, 1891)

Seed lists of petunias from the 1890's onward confirm William Robinson's observation made in an edition of his magazine. Since the mid-1800's, grandiflora petunias in single, fringed, and double forms were always available. The development of the California Giant petunias during the early 1890's was considered a major triumph for American breeders. This strain was generally sold as a mixture of single, fringed blossoms over four inches in diameter which were either striped, veined, or blotched in a wide array of colors.

However, the large forms were not always preferred in the literature of this period. Gertrude Jekyll did not even consider petunias in Colour in the Flower Garden (1908) and could recommend only the white cultivars in Annuals and Biennials. Louise Beebe Wilder specifically endorsed petunia Rosy Morn, a small bedding cultivar, used in combination with Salvia patens, but made no further mention of other forms in her Colour in My Garden. Generally, petunias recommended for reliable performance in the garden were those in the single, small-flowering categories. Often, cultivars specifically cited were some of the oldest, such as Countess of Ellesmere, Blotched and Striped, and Kermesina. Although the giants were the pride of the seedsmen, it appears their use was probably

more for pot culture and for cutting than for flower borders.

Marigold

From the descriptions and photographs of marigolds at the turn of the century, their appearance was virtually indistinguishable from today's. The major forms of African marigold (Tagetes erecta) included Eldorado, Nugget of Gold, Lemon Queen, Orange Prince, and two dwarf forms -- Pride of the Garden (yellow) and Delight of the Garden (lemon yellow). The favorite French marigold (T. patula) from around 1900 through 1914 was Legion of Honor or Little Brownie, with golden blossoms marked with maroon or velvety red. Two cultivars of signet marigold (T. tenuifolia) were also available under the names Golden Ring (orange) and Cloth of Gold (yellow).

Marigolds were used to fill spaces between perennials and, the low growing French and signet marigolds in particular, for borders and edging. Louise Wilder found marigolds useful for sunny effects along with zinnias, California poppies, calendulas, mulleins, Mexican prickly poppies, and other yellow and orange flowers.¹⁷

But it was the pale sulphur and the brilliant

orange African marigolds in particular which Gertrude Jekyll used to carry the experience of gardening to new dimensions. Her flower borders were designed in sequences of grays and purples which swelled to strong reds and scarlets, blood-reds and clarets, back to yellows and, as the eye became saturated with these rich colors, the sequence then reversed to grays, blues, and purples again. She appreciated African marigolds for the optical effects they achieved in her color arrangements.

The brilliant orange African Marigold has leaves of a rather dull green colour. But look steadily at the flowers for thirty seconds in sunshine and then look at the leaves. The leaves appear to be bright blue!¹⁸

Her theory, therefore, was that grays and blues would refresh the eyes and appear more brilliant after "the preparation provided by their recently received complementary colour."¹⁹

Drummond's Phlox

. . .the annual Phlox Drummondii alone has produced distinct varieties enough to furnish a garden with almost every shade of colour.
(William Robinson, The English Flower Garden, 1899)

A great deal of enthusiasm was expressed about Drummond's phlox on both sides of the Atlantic during the

early twentieth century. American seed catalogues offered a diversity of forms and cultivars far exceeding what is now available in standard catalogues. Much of the seed was produced in the seed growing districts of Europe at that time, including Messrs. Haage and Schmidt's nursery at Erfurt, Germany. An article in the Gardener's Chronicle of 1898 described these fields when in full bloom as resembling ". . .an endless Turkish carpet of the most glowing colors."²⁰ Annual phloxes were divided by the British into seven classes, all of which were represented in American lists although here they often were combined into three or four classes. The more extensive British classification is described below:

Phlox drummondii: the old tall class, growing around 1 foot in height and distinguished by bright and uniform colours.

P. drummondii grandiflora: same height as former. . .produces largest flower trusses of the whole tribe. In this section a good many varieties with a large pure white center (--stellata) or with white eye and dark center (--oculata). Colours beautiful when cut and looked at but do not show off well in groups.

P. drummondii Heynholdii: 10 inches high, grows sparingly. Best for pot culture. Succeeds in hot summer in open ground. Colours mostly vermillion-scarlet to rose.

P. drummondii cuspidata and fimbriata: starred and fringed phloxes introduced around 1891. One foot high. Curious looking, lovely margined flowers show beauty only in a cut state, as in a flower bed one may call this class ugly.

P. drummondii Graf Gero: eight inches high. Upright growing variety, produces small flower trusses, recommended only for pots.

P. drummondii Hortensiaeflora: one of the most beautiful forms. Dwarf, five to six inches high. Forms big round bushes with large flower trusses; the individual flowers almost as large as the grandiflora section. There is no better class for the flower garden than this. /many in this class were listed as grandiflora types in American catalogues.⁷

P. drummondii nana compacta: a dwarf, compact class, four to five inches high. Does not produce such large flower trusses as Hortensiaeflora, but of a more uniform growth.²¹

Annual phloxes were used in mixed borders, cutting gardens, and in solid masses reflecting the carpet or ribbon bedding influences. Some of the dwarf forms were recommended as ground covers and an article in a 1891 edition of The Garden suggested that ". . .beds or groups of standard Roses and other plants may be brilliantly carpeted with them without in any way interfering with their growth."²² The great variety of colors and free growth habit worked well in color schemes in the mixed border. For the open garden, Gertrude Jekyll preferred P. drummondii coccinea (a grandiflora type) and the salmon-colored cultivar called Chamois Rose (of the old, tall class). But she also found the dwarf kinds well suited for rock work.²³ Several annuals in this study were also subjects for the emerging cult of rock gardeners.

Zinnia

It is not long since the Zinnia was considered a coarse plant, with muddy color effects in the flowers, and we must confess that we are surprised at the improvements made in the past few years.

(James Vick, Garden and Floral Guide, 1908).

Although the coarse habit of growth was still a question of taste for some, the many new colors available in zinnias (Z. elegans) improved their status tremendously. Catalogues offered separate as well as mixed colors in all groups which included:

Giant-flowering Double: about 3 feet high double flowers from four to five inches in diameter.

Tall Double: same height as above, smaller flowers.

Dwarf Double: only two feet high; compact growth. large flowers.

Lilliput: fifteen inches high, and thickly branched. flowers but little larger than a daisy in size, very double. . .

Tom Thumb: varies from four to twelve inches in height, and from six to fourteen inches in diameter, forming compact, free-flowering, pigmy bushes, suited for edgings, small beds, and pot plants.²⁴

Color selection was an individual matter. In The Well-Considered Garden, Louisa King made several references to the "flesh-colored" zinnias which worked best in her designs. For Louise Wilder, the golden yellow and

burnt orange as well as the ashen pink and salmon pink zinnias were considered ". . .good perpetual flowering plants for filling in the blanks left by biennials. . . ."25

Zinnias could still not be relied upon to come true to color. For the more informal, old-fashioned border this situation was perfectly acceptable. However, for carefully thought-out color schemes, many best laid plans went awry. Louisa King warned her readers to avoid any zinnia seed marked "Rose" while Harriet Keeler considered zinnias in general to be unpredictable. "No other flower of cultivation takes on such a surprising number of hues, but there is always an element of chance in what a seed may produce."26

California Poppy

Interest in this brilliant flower increased during the early twentieth century. Breeders selected for compactness of habit and purity of color. Mandarin, Cross of Malta, Rose Cardinal, and Golden West were the major results of this type of selection available in the trade. (see appendix for descriptions.) A flower with solid crimson petals both inside and out was a goal sought and, in 1906, introduced to commerce by Luther Burbank in his Burbank's Crimson California Poppy. A comparable form

was introduced around the same time by the Carter firm as Carmine King and, by his own account, a year earlier as Eschscholzia californica intus rosea by Alfred Watkins, F.R.H.S.²⁷ In any case, the form available to the American public was Burbank's introduction.

In both America and England, California poppies were recommended for mixed borders, banks (in masses), and edging. Fall sowing was occasionally suggested.

Cockscomb

Catalogues of the early 1900's continued to advertise cockscombs in the predictable, sensational manner as their predecessors of a few decades earlier. The crested forms by that time included Dwarf Chamois (fawn colored), Empress (purple), Glasgow Prize (crimson), Golden Yellow, Queen (rose), Vesuvius (scarlet), and Queen of Dwarfs (dark scarlet). The plumed sorts also came in a number of cultivars, the most noted being Golden Yellow, Thompson's Superb (crimson), and Ostrich Feather (crimson).

Although catalogues endorsed them for bedding, many proponents of more naturalistic gardening discouraged their use. Louise Wilder reacted negatively to many bed-

ding-plant stereotypes and "coxcombs" were included in her list of "taboo plants" for bedding out, along with coleus, alternanthera, castor oil plants, crotons, cupheas, and many others.²⁸ Gertrude Jekyll was a bit more tolerant. Although she considered the magenta cockscomb to be ". . . a plant unbeautiful both of form and colour."²⁹ she did approve of the feathered or plumed kinds as long as the harsh crimsons were avoided.

Balsam

Its reputation as an "old-fashioned" flower recommended balsam in nostalgia gardens. Aside from the Defiance and Solferino forms, which were essentially improved strains of the traditional Carnation, Rose, and Camellia-flowered forms, new introductions were few during the early twentieth century. The garden literature of the period included balsams in mixed borders, especially for shady areas, but they were not featured plants in general. Balsams appear to have been reduced to a secondary role as garden annuals.

Gaillardia

Gaillardia, or blanket flower, became increasingly more important in the flower garden although, like

balsam, there were few improved introductions during this period. Robinson considered the flowers ". . .valuable for their long duration both on the plants and in a cut state,"³⁰ and Harriet Keeler also considered them excellent as cut flowers because ". . .the heads stand up on good, self-respecting stems and take water freely."³¹ Their durability in the garden from midsummer until late autumn rendered both G. pulchella var. picta and lorenziana attractive subjects for mixed borders.

Portulaca

The large-flowered single and double forms of portulaca were standard items in any seed catalogue of this period. They were sold to be grown in carpet-like masses on sunny slopes or hot exposed situations with soils prone to dryness, much as they are advertised today. During the early 1900's mention of their use in rock gardens also began to appear.³²

Gilia

American catalogues generally offered gilia as mixed colors, however, a few offered the three-colored species (G. tricolor) in separate white (--nivalis alba) and azure blue (--capitata) forms. Gertrude Jekyll con-

dered them "pretty plants. . .but not of the first importance."³³ There is evidence that gillias were also used in rock gardens, at least in England, as well as in mixed borders.

Abronia

By the twentieth century abronias occurred less frequently in American seed lists. The species, when offered, remained unchanged and descriptions were little altered. Both Peter Henderson and William Robinson suggested that these trailing plants were "well adapted for rock-work" or in an open, well-drained border.^{34,35}

Collinsia

Like gillias, collinsias appear to have been of minor importance in the garden during the early 1900's. Peter Henderson found them ". . .of great beauty, and deserving of cultivation, being well adapted for massing and for mixed borders."³⁶ Collinsia bicolor was the type most often sold, although some catalogues did offer C. bicolor alba and C. verna (sky blue and white), all of which are now called C. heterophylla.

Clarkia

Clarkias were moderately popular during this period especially with the development of the cultivar Salmon Queen. Louisa King found this salmon flower to be ". . .one of the most graceful and remarkably pretty annuals which have ever come beneath my eye"³⁷ and Jekyll, likewise, mentioned that "seed growers have obtained a desirable salmon-coloured variety. . ."³⁸ although she still considered the original plants which bore "clouds of pink bloom . . . [to be] the most refined in color."³⁹

Tom Thumb cultivars were also available by the 1890's, including a distinct form name Mrs. Langtry which was white with an evenly defined center marking of crimson. The Tom Thumb sorts were developed from C. pulchella whereas the double flowered sorts were developed from the larger species, C. elegans. American seed firms did not offer the diversity of cultivars available in Europe as a rule; however, some of the more outstanding cultivars did appear to be in demand.

Sweet Pea

The Cult of the Sweet Pea has now extended far outside the Kitchen garden.
(Charles H. Curtis, Sweet Peas and Their Cultivation, 1908)

Henry Eckford's work with sweet peas, begun in the 1870's, was so successful that by the turn of the century over one hundred and thirty cultivars could be attributed to his selections. Eckford aimed to improve not only the color, but also the substance and quality of the flower. His growing techniques, which included giving each seedling a great amount of growing room, increased the plants' vigor appreciably. The majority of sweet pea cultivars available during the 1880's and '90's in this country were Eckford introductions.⁴⁰

Joseph Breck and Sons was one of the first American enterprises to recognize and import the improved sweet peas, but W. Atlee Burpee and Co. soon became a leader in seed distribution. California became a seed production center during the 1890's primarily through the seed farms of C. C. Morse and Company of San Francisco.⁴¹ It was at the Morse farms that the type plant from which Burpee's Cupid sweet peas were derived. Cupid was introduced by Burpee in 1893 as the first dwarf, white-flowered sweet pea.⁴²

The miniature sweet pea received mixed reactions. Charles Curtis' history of sweet peas, which is naturally biased toward English work, states that the Cupids had not become popular in that country either for pot culture

or for the edges of flower borders. His quotation of a description from the June 29, 1895 edition of The Garden has a definite Robinsonian quality.

Sweet Pea Cupid -- A miniature variety, of which nine pots were shown, the shoots being about a foot long and profusely flowered, the flowers pure white, and as large as those of the ordinary forms. We fail to see the value of this, which is a poor apology for a noble garden flower, and nothing will be gained by dwarfing Sweet Peas into comparative insignificance. The craze for a pigmy strain of our best garden flowers is to be deprecated.⁴³

Nevertheless, the new introduction was granted an Award of Merit by the Floral Committee of the Royal Horticultural Society at the show to which this article referred. In this country, Cupid sweet peas were highly acclaimed.

Other important American introductions of the late nineteenth and early twentieth centuries were Navy Blue, America (striped white and scarlet), and Helen Pierce, which was the first marbled form.⁴⁴

The most sensational breakthrough in sweet-pea history occurred at the First Exhibition of the National Sweet Pea Society on July 25, 1901, only a year after the first sweet pea show was held at the Crystal Palace in which Eckford entered so many of his introductions. It was at the 1901 exhibition that Silas Cole, gardener for Earl Spencer at Athorp Park, Northampton, entered a pink

sweet pea which was the first known to have frilled or waved segments. Charles Curtis described that day at the Royal Aquarium, Westminster as follows:

The day was . . . remarkable for the terrific thunderstorm that raged over London; some of the rain found its way through the Aquarium roof, and, bringing with it a portion of London's soot deposit, it stained the papers on the show tables and made a terrible mess. But the day was memorable for another reason; Countess Spencer, a beautiful pink Sweet Pea, with frilled or waved segments was exhibited by Mr. Silas Cole . . . and it marked the beginning of a new era in Sweet Pea development. The Sweet Pea experts unhesitatingly granted the newcomer a First Class Certificate. . . .⁴⁵

It was not until 1903 that the Countess Spencer, which proved to be highly variable from seed, was "fixed" and redistributed as John Ingman.

It is interesting that the new form, like the first refined Viola tricolor, occurred almost simultaneously in four different localities. Crane and Lawrence's The Genetics of Garden Plants traces this occurrence to an unstable cultivar called Prima Donna. Accounts indicate that the waved type appeared in rows of Prima Donna grown by Mr. E. Viner at Frome, Henry Eckford at Wem, and W. J. Unwin at Histon, all around the same time that Silas Cole discovered Countess Spencer. Crane and Lawrence describe this phenomenon as follows:

. . . the waved character is determined by

a recessive gene which must have arisen as a mutation from the dominant normal form. . . .In a very short time the new character was combined with numerous other flower colours by hybridisation . . .⁴⁶

As the extensive lists of sweet peas in Appendix II indicate, the response to their cultivation in this country was overwhelming. In an attempt to clear-up some of the confusion which understandably resulted from these endless lists, many seed catalogues separated them into color categories or classes. Selection was still a difficult matter and garden writers advised their readers merely to try a few new ones each year and then decide.

By 1914, the love of sweet peas was at its height. In Landreth's catalogue of flower seeds the sweet pea section began with an impressive dedication to this craze.

The whole world is engaged in a further development of the Sweet Pea -- a development as to size, color and stability, or firmness of form. Horticultural Congresses are called together in London, Paris, Berlin, and American cities at appropriate seasons to admire the new forms, and to pass awards of merit to the credit of the successful breeder of the new types.⁴⁷

The note of optimism and suggestion of unity among the world's leading cities seems particularly ironic in light of the times during which this announcement was made.

Of all annuals popular during this period, the sweet pea was most representative of the taste and spirit of the post-Victorian years. The delicate, airy blossoms and trailing habit could not have competed with the colorful, stocky bedding plants of the previous decades. Sweet peas had an informal quality which appealed to nostalgic sentiments. At the same time, the surge of improved forms satisfied the public's desire for novelty. Like reproduction furniture which flooded the market as part of the Arts and Crafts Movement, sweet peas combined elements of progress with hints of the past. Such developments are never without a price. Gertrude Jekyll subtly alluded to this unavoidable situation in Annuals and Biennials.

It is a curious and extremely regrettable fact that so many of the fine Sweet Peas of the newer kinds are almost scentless. Forty years ago the old hedge of mixed Sweet Peas was the sweetest thing in the garden.⁴⁸

FOOTNOTE FOR CHAPTER V

¹Gertrude Jekyll, Colour in the Flower Garden (London: Country Life, Ltd., 1908), p. 74.

²William Robinson, The Garden, 39 (March 7, 1891): 223.

³"The Flower Beautiful," The House Beautiful, March 1902, p. 316.

⁴G. W. Kerr, "Growing High Quality China Asters," The Garden Magazine, March 1912, p. 83.

⁵S. L. Emsweller et al., "Improvement of Flowers by Breeding," Yearbook of Agriculture 1937 (Washington, D. C.: U. S. Government Printing Office, 1937), p. 927.

⁶J. M. Thorburn and Co., Thorburn's Seeds, 1905, (Harrisburg, PA, 1905).

⁷Kerr, "China Asters," p. 85.

⁸Emsweller, "Breeding," p. 927.

⁹Ida Bennett, The Flower Garden (New York: Doubleday, Page & Co., 1910), p. 111.

¹⁰David Landreth Seed Co., Landreth's Seed (Bristol, PA, 1908), p. 68.

¹¹Landreth's Seed, 1914, p. 89.

¹²Landreth's Seed, 1902.

¹³Gertrude Jekyll, Annals and Biennials (London:

Country Life, Ltd., 1916), p. 140.

¹⁴Harriet L. Keeler, Our Garden Flowers (New York: Charles Scribner's Sons, 1910), p. 493.

¹⁵Joseph Breck and Sons, Catalogue of Flower Seeds (Boston, 1900), p. 112.

¹⁶Ibid.

¹⁷Louise Beebe Wilder, Colour in my Garden (New York: Doubleday, Page and Co., 1918), pp. 160-161.

¹⁸Jekyll, Colour, p. 52.

¹⁹Ibid.

²⁰C. Schmidt, "Annual Phloxes," Gardener's Chronicle, January 1898, pp. 6-7.

²¹Ibid.

²²Robinson, The Garden, 39 (March 28, 1891): 293.

²³Jekyll, Annals, p. 136.

²⁴James Vick, Vick's Garden and Floral Guide (Rochester, 1908), p. 66.

²⁵Wilder, Colour, p. 127.

²⁶Keeler, Garden Flowers, p. 493.

²⁷Alfred Watkins, F.R.H.S., "Annual Flowers," Journal of the Royal Horticultural Society, 34 (July 1908): 184-185.

²⁸Wilder, Colour, p. 200.

²⁹Jekyll, Annals, p. 80.

³⁰William Robinson, The English Flower Garden, 7th ed. (London: John Murray, 1901), p. 565.

³¹Keeler, Garden Flowers, p. 478.

³²Adolph Kruhm, "The Annuals Best for Bedding," The Garden Magazine, July 1912, p. 366.

³³Jekyll, Annuals, p. 80.

³⁴Peter Henderson, Henderson's Handbook of Plants (New York: Peter Henderson & Co., 1890), pp. 5-6.

³⁵Robinson, English Garden, p. 409.

³⁶Henderson, Handbook, p. 97.

³⁷Louisa Yeomans King, The Well-Considered Garden (New York: Charles Scribner's Sons, 1915), p. 36.

³⁸Jekyll, Annuals, p. 87.

³⁹Ibid.

⁴⁰Charles H. Curtis, F.R.H.S., Sweet Peas and Their Cultivation (London: W. H. & L. Collingridge, 1908), p. 20.

⁴¹Ibid., p. 22.

⁴²M. B. Crane and W. J. C. Lawrence, The Genetics of Garden Plants (London: Macmillan and Co., Ltd., 1939), p. 46.

⁴³Curtis, Sweet Peas, p. 26.

⁴⁴Crane, Genetics, p. 44.

⁴⁵Curtis, Sweet Peas, pp. 22-23.

⁴⁶Crane, Genetics, p. 44.

⁴⁷Landreth's Seed, 1914, p. 90.

⁴⁸Jekyll, Annals, p. 56.

CONCLUSIONS

The years 1865 through 1914 were marked by a unique sequence of social changes in eastern North America which had profound impact upon the development of annuals. Technological innovations and changing cultural attitudes characterized this pivotal age and acted as driving forces behind the swift advances in horticulture. The change in some annuals was so dramatic that by the first decades of the twentieth century they bore little resemblance to the types familiar to early nineteenth-century gardeners.

Many of the transformations observed in annuals are attributable to the Industrial Revolution. Improved transportation systems distributed flower seeds swiftly to expanding markets where tastes were quite different from the narrow, elite consumers of previous years. Annuals were popularized by organized commercial agencies whose marketing techniques broadened the exposure and salability of their products. Popularizing forces were further augmented by the increased availability of gardening ideas and information through mass-produced literature which encouraged the use of a variety of flowers by all factions of society. By World War I an astounding selection of

cultivated varieties had been produced and marketed by a number of well-established seed firms. The American seed industry itself achieved substantial independence, although influences from abroad were still apparent.

Gardening styles also dictated which types of plants were most commonly used. Still, our close ties with England directly affected the cultural attitudes and tastes behind gardening vogues within this country. The ornate carpet bedding of the mid-Victorian era from the 1850's through the 1870's, which featured dwarf, stiff plants with large, brightly colored flowers, exemplifies a gardening style which filtered to America from across the Atlantic. It fostered an interest in annuals of uniform growth which were durable, vigorous, and relatively easy to cultivate. Breeding efforts focused on these qualities and many new "bedding annuals" were developed.

As the Victorian era wore on, a strong eclecticism crept into gardening and reached its height in the early twentieth century. As a result, garden designs ranging from highly architectural to simple and informal often showed European, English, and even Oriental influences. Anti-Victorian sentiments and national pride at the turn of the century led to stylistic revivals which stimulated interest in traditional "colonial" and "old-fashioned"

cottage gardens. But the best gardens, as seen by the proponents of garden taste, were creative expressions of the designer rather than effusive floral potpourris or imitations of mosaics and ribbons. Annuals were used in combination with herbaceous and woody plants in these more subtle, impressionistic designs rather than being featured as set pieces in the middle of lawns. Although many of the same plants used in carpet bedding reappeared in these entirely different styles, cultivars with freer habit were selected. While bedding out did lose favor, certain sectors of society remained loyal to the style. With respect to the cyclical nature of fashions, it is not surprising that the bedding-out system is still widely used for broad public appeal, especially in parks and exhibitions.

The breeders' heightened ability to direct the breeding of plants led to great variation in annuals. Seedsmen announced each season's latest discoveries and breakthroughs with much fanfare, cultivating the public's curiosity and passion for novelty. Even the most bizarre aberrations were touted and discriminating gardeners were wise to look to the more credible endorsements of horticultural societies, garden experts, and reliable seedsmen to sort out the truly desirable introductions. Again,

many contemporary breeding pursuits, as well as the advertising techniques used to promote them, can be traced to late nineteenth-century origins. The qualities in annuals sought by modern breeders -- ease of culture, vigorous habit, purity of color, extended blooming periods -- were similarly pursued by breeders a century or more ago.

An awareness of the evolution of annuals is important in many areas of public gardening, but especially for the recreators of historical gardens. This study has utilized fragile and ephemeral tools of historical research which desperately need exploring -- the popular magazines, catalogues, lists, and other transient literature so much a part of the day-to-day stimulation of late nineteenth-century gardeners. Such material not only helps to explain what was possible or likely during specific times, but also provides valuable insight into the process by which tastes and vogues evolve. Certainly the preservation of this material is a crucial need which is only lately being realized. Many of our best catalogue collections are stored in poor conditions, are inadequately catalogued, and are improperly preserved. Collections are further threatened by dwindling institutional budgets which can no longer afford to maintain such friable material. The destruction and dispersal of this primary documentation

creates a bibliographical problem which garden historians must face and strive to prevent.

APPENDIX I

FOUR PRE-1865 LISTS OF ANNUALS

The following seed lists are included to establish the extent of annuals available prior to the Civil War and to illustrate the nature of earlier catalogues. They are intended to be used for comparison with lists of the last half of the nineteenth century which Appendix II addresses. The lists included are:

David & Cuthbert Landreth. Periodical Catalogue.
Philadelphia, 1832.

Flanagan & Nutting, Seedsmen and Florists. A Catalogue of Seeds. London, 1835.
(In Early Gardening Catalogues. John Harvey. 1972.)

George C. Thorburn. Catalogue of Seeds. New York, 1838.

Joseph Breck & Co. Catalogue of Flower Seeds.
Boston, 1845.

PERIODICAL
CATALOGUE
OF
GREEN-HOUSE AND HARDY HERACEOUS
PLANTS AND SHRUBS,
ORNAMENTAL AND FRUIT TREES,
BULBOUS AND TUBEROUS
FLOWERING ROOTS,
VEGETABLE AND FLOWER SEEDS,
CULTIVATED BY
D. & C. LANDRETH,
AT THREE
NURSERIES AND GARDENS,
ON FEDERAL STREET NEAR THE UNITED STATES ARMY,
AND FIFTH STREET BELOW FEDERAL.
WITH A LIST OF
Agricultural and Horticultural Implements,
CONSTANTLY FOR SALE AT THE
WAREHOUSE, NO. 85 CHESTNUT STREET.
TO WHICH IS ADDED,
A TREATISE
ON THE CULTIVATION OF VEGETABLES IN GENERAL,
Founded upon their own experience;

Philadelphia:

PRINTED BY WILLIAM STAYEN.

1832.

Price Twelve and a half Cents.

David Landreth, 1832.

FLOWER SEEDS.

75

POT AND SWEET HERBS.

thyme,
sweet basil,
sweet marjorum,
anise,
rosemary,
sage,
summer savory,
winter savory,
caraway,
lavender,
coriander,
pot marigold, &c.

In papers of 6 cts. and up-
wards, or 5 dollars per
hundred, assorted.

EARLY SEED POTATOES, 75 cents per bushel.

white onion sets.
yellow onion sets
garlick sets.

also cabbage, lettuce and cauliflower plants, in their season.

FLOWER SEEDS.

ANNUAL BIENNIAL AND PERENNIAL.]

t, denotes tender ones. c, climbers. Price six cents per
paper, or five dollars per hundred assorted.

Flos Adonis, or Pheasant's

Eye

Sweet Alyssum

Love Lies Bleeding

Straw Colored do.

Prince's Feather

Three Coloured Amaranthus

China Aster

Animated Oats

Scarlet Soap Dragon

Double Columbine

Rose Campion

Chinese Hollyhock

Strawberry Spinach

Scarlet Cacalia, or Tassel
flower

Adonis miniata

Alyssum maritimum

Amaranthus caudatus

— var. *lutea*

— *hypocondriacus*

— *tricolor*

Aster sinensis

Avena sensitiva

Antirrhinum majus

Aquilegia vulgaris

Agrostemma coronaria

Althea rosea

Blitum capitatum

Cacalia coccinea

Starry Marigold	<i>Calendula stellata</i>
Venus' Looking Glass	<i>Campanula speculum</i>
American Centaurea	<i>Centaurea Americana</i>
Great Blue Bottle	— <i>cyanus major</i>
Purple Sweet Sultan	— <i>moschata</i>
Yellow —	— <i>rupeolens</i>
Blessed Thistle	— <i>benedicta</i>
Crimson Dwarf Cockscomb	<i>Celosia cristata</i>
Yellow Cockscomb	— <i>var. lutea</i>
Ten week Stockgilly flower	<i>Cheiranthus annuus</i>
Annual Chrysanthemum	<i>Chrysanthemum coronarium</i>
Job's Tears	<i>Coix lachryma Jobi</i>
Dwarf convolvulus	<i>Convolvulus minor</i>
Canterbury Bell, white and blue	<i>Campanula medium</i>
Scotch Silver Leaved Thistle	<i>Carduus sp.</i>
Wall Flower	<i>Cheiranthus cheiri</i>
Brompton, Stockgilly flower	— <i>incanus</i>
Elegant Coreopsis	<i>Coreopsis tinctoria</i>
Dahlia	<i>Dahlia superflua</i>
Bee Larkspur	<i>Delphinium elatum</i>
Carnation Pink	<i>Dianthus caryophyllus</i>
Pheasant Eyed	— <i>plumarius</i>
Clove	— <i>hortensis</i>
Sweet William	— <i>barbatus</i>
Purple Fox Glove	<i>Digitalis purpurea</i>
White —	— <i>fl. albo</i>
Branching Larkspur	<i>Delphinium consolida</i>
te Purple Hyacinth Bean	<i>Dolichos lablab</i>
te White Hyacinth Bean	— <i>var. albo</i>
Variegated Euphorbia	<i>Euphorbia variegata</i>
te Cotton Plant	<i>Gossypium herbaceum</i>
Purple globe Amaranthus	<i>Gomphrena globosa</i>
White —	— <i>fl. albo</i>
Tall Sun Flower	<i>Helianthus annuus</i>
Dwarf —	— <i>v. nanus</i>
Bladder Ketmia	<i>Hibiscus trionum</i>
White Candytuft	<i>Iberis sp.</i>
Purple —	— <i>sp.</i>
Double Balsamine, mixed	<i>Impatiens balsamina</i>
te Scarlet Morning Glory	<i>Ipomoea coccinea</i>
te Cypress Vine	— <i>quamoclit</i>
te Sweet Peas, various	<i>Lathyrus odoratus</i>

FLOWER SEEDS.

77

Winged Peas	<i>Lotus tetragonolobus</i>
Red Lavatera	<i>Lavatera trimestris</i>
Rose and blue Lupins	<i>Lupinus pilosus</i>
Yellow Lupins	— <i>luteus</i>
Everlasting Peas	<i>Lathyrus latifolius</i>
Honesty, or Satin Flower	<i>Lunaria annua</i>
Perennial Lupin	<i>Lupinus perennis</i>
Scarlet Lychnis	<i>Lychnis chalcedonica</i>
Curled Standing Mallow	<i>Malva Crispa</i>
Caterpillars	<i>Medicago circinnata</i>
Hedge Hogs	— <i>intertexta</i>
Snails	— <i>scutellata</i>
Ice Plant	<i>Mesembryanthemum chrysal-</i> <i>linum</i>
Sensitive Plant	<i>Mimosa pudica</i>
Marvel of Peru	<i>Mirabilis jalapa</i>
Devil in a Bush, or love in a Mist	<i>Nigella damascena</i>
Evening Primrose	<i>Oenothera garandiflora</i>
White official Poppy	<i>Papaver somniferum</i>
Double Carnation Poppy	— <i>fl. pleno</i>
Scarlet Flowering Bean	<i>Phaseolus multiflorus</i>
Red Persicaria	<i>Polygonum orientale</i>
Polyanthus	<i>Primula polianthus</i>
Cowslip	— <i>veris</i>
Mignonette	<i>Reseda odorata</i>
White Egg Plant	<i>Solanum melongena</i>
Purple Rudbeckia	<i>Rudbeckia purpurea</i>
Starry Scabious	<i>Scabiosa stellata</i>
Wing Leaved Schizanthus	<i>Schizanthus pinnatus</i>
Purple Jacobea	<i>Senecio sp.</i>
White —	— <i>sp.</i>
Lobel's Catch Fly	<i>Silene armeria</i>
Sweet Scabious	<i>Scabiosa atropurpurea</i>
Balsam Apple	<i>Momordica balsamina</i>
African Marigold	<i>Tagetes erecta</i>
French	— <i>palula</i>
Nasturtium	<i>Tropaeolum majus</i>
Heart's Ease or Pansey	<i>Viola tricolor</i>
Golden Eternal Flower	<i>Xeranthemum lucidum</i>
Purple — —	— <i>annuum</i>
Mexican Ximenesai	<i>Ximenesia enceloides</i>
Red Zinnia	<i>Zinnia multiflora</i>
Yellow	— <i>pauciflora</i>
Violet colored Zinnia	— <i>degans</i>

A CATALOGUE

or

SEEDS.

SOLD BY

FLANAGAN & NUTTING,

Seedsmen and Florists,

9,

MANSION HOUSE STREET,

OPPOSITE THE MANSION HOUSE,

LONDON.

NETCALFE, PRINTER, 3, GROCERS' HALL COURT, POULTRY.

1835.

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8

Chicory	Oats, Black
Furze	Pollard
Grass, Sweet Vernal	Dutch Brew
Meadow Fox-tail	Tartarian
Smooth Meadow	Potato
Rough-stalked	Peas, Grey Rouncival
Crested Dog's-tail	White Boiling
Meadow Fescue	Rape or Cole Seed
Sheep's Fescue	Tares, Winter
Fine or Heath	Spring
Rough Cock's foot or Orchard	Turnip, Green Round
Timothy	White Round
Rib or Plantain	Red Round
Brome or Soft	Globe
Lucerne	Large Scotch Yellow
Ray or Bents	White Tankard
St. Foin	Red Tankard
Yarrow	Green Tankard
mixed, for Lawns	Stubble
Linseed, or Riga flax	Yellow Swedish
English	Red-topped Swedish
Mangle Wüzel	Wheat, White
Yellow	Red
Mustard, White	Spring
Brown	Talavera

FLOWER SEEDS.

HARDY ANNUALS,

Which may be sown, in open borders, from the middle of February to the end of April.

Adonis, Flos, vernalis	Alvum, maritimum, or
estivalis	sweet
Agrostemma, Caeli rosa	Alkekengi

Anemhyata coerules
Ambrosia, Species
Anthericum autumn
Angalia Indica
cerules
new bluish
Anthrimum bipunctatum
medium
speciosum
spartium
latifolium
triphyllum
viscosum
versicolor
Arctotis tristis
anthemoides
Aster tenella
Athanasia annua
Balm, Moldavian, White
Blue
Belvidere, or Summer
Cypress
Bidens diversifolia
Bladder, Ketmia
Briza maxima
Calendula hybrida
stellata
Calliopsis bicolor
Calochortus venustus
apendens
Campanula pentagonia
peractifolia
Candytuft, Normandy
purple

Candytuft, white rocket
small white
sweet scented
dark purple, new
variety
Catananche lutea
Caterpillars
Catchfly, Lobel's, red
white
New Siberian
Centaurea cyanaea, minor
do. double dwarf
Crepina, major
Grocodilla
Elongata
Cerintho aspera major
minor
Chenopodium scoparium
Chrysanthemum carinatum
(tricolor)
coronarium, white
yellow
do. quilled
aureum
Chrys, red top
purple top
Claytonia perfoliata
Collinsia grandiflora
verna
Convolvulus minor (tricolor)
(bicolor)
major purpurea
Michauxii
fine-striped

9

10

Convolvulus, colors, separate
Clarkia pulchella
alba
elegans
Coreopsis tinctoria
diversifolia
Atkinsonia
Coronilla Securidaca
Corydalis sempervirens
Dracoccephalum caucasicum
Elaboltzia cristata
Echium violaceum
plantaginifolium
Eutoca multiflora
Gilia capitata
pulchella
tricolor
Glaucium Pharnacium
Violaceum
Gypsophila elegans
viscosa
Hawkweed, yellow
purple
new straw
Hedgehogs
Horns
Hioscyanum angustifolia
pictus
Iberia umbellata
odorata
Impatiens
Isotoma axillaris
Knautia orientalis
Larkspur, Dwarf Rocket

Larkspur, tall Rocket
fine Rose
Branching
Neapolitan
Unique
in distinct colours
Lavatera, Red
White
Love lies Bleeding
Lobelia, Annual
Lupinus, Yellow
White
large Blue
do. Rose
small Blue
Straw-coloured
Dutch Blue
Lupinus mutabilis
micranthus
Cruikshankii
Lusania calycina
Lychnia beta
dwarf
fulgens
Scarlet
curled
Venetian
Malope trifida
grandiflora
Malconia Africana
Madia elegans
Melilotus coerules
Mignonne, Sweet
Upright or Heredia

11		12	
Nasturtium, tall	Pens, large Scarlet Tanager	Silene pecta	Venus's Looking-glass
dwarf	small do. do.	pendula	do. White
new dark	Painted Lady do.	rubella	do. large Blue
Nigella, Roman	Yellow-winged	vespertina	do. new Lilac
Double Dwarf	Red do.	Trifolium incarnatum	do. Navel-wort
Orientalis	Lord Anson's	coruleum	Vicia atropurpurea
Spanish	Persicaria, Red	Veronica, Species	Ximenesia encelioides
Nolana parodoxa	White	HALE HARDY,	
prostrata	Poppy, Carnation	Which should be sown in March, under Hand Glasses, or in a very moderate Hot-bed, and transplanted into the border in the middle of April or beginning of May.	
Oenothera grandiflora	Picotee	Ageratum Mexicanum	Cacalia coccinea
Lindleyana	New Fringed	Odoratum	Campanula gracilis
purpurea	Double White	Anthemis Arabica	Cardiospermum Halicac-
rosea	Ranunculus or Dwarf	Argemone albiliflora	bum
sinuata	Dwarf, Chinese	Mexicana	Carlinaus tinctoria
tetraptera	Do. French	Ochroleuca	Calceolaria pinnata
temifolia	in separate Colours	Aster, Chinese, red	Calendrina speciosa
tenella	Prince's Feather, Red	ditto, purple	Centaura Americana
vinacea	White	ditto, white	Cistus guttatus
malissima	Roman Nettle	ditto, bonnet	Claytonia alainoides
nocturna	Rudbeckia amplexifolia	ditto, new early Dwarf.	Clintonia elegans
decumbens	Scabiosa, Starry	superb red	Cyclobotria pulchella
odorata	Scabiosa prolifera	ditto, white	alba
Romanzovii	Smilla	ditto, blue	Coix lachryma
rosea-alba	Sun-flower, tall	fine quilled blue	Colutea, scarlet
bifrons	dwarf	ditto, white	Cuphea viscosissima
tanaxifolia	extra double	striated red	Datura cernitocaula
Pear, Sweet Purple	Snap-dragon	ditto, purple	Metel
do. Scarlet	Stock, Virginia, Red	new German varieties	Tatula
sweet Striped	White	new Turkey red	Dendromecon rigidum
do. White	Strawberry Spunch	Balm of Gilead	Dolichos Lablab
do. Yellow	Silene Atoclon	Blumenbachia insignis	purpureus
do. Black	colorata		
do. Painted Lady	disticha		
do. Top-knot	major		

13

Gallsogea trilobata
Hollyhock, Chinese
Hibiscus Africanus
Hornemannia bicolor
Ipomoea Michauxii
barbigera
discolor
hederacea
hepaticifolia
Jacobaea, purple
white
fine double
Kaulfussia anelloides
Leonurus heterophyllus
Nepenthes
Lopezia coronata
racemosa
Marvel of Peru, red
white
yellow
lg. tubecor sweet scented
gold-striped
silver-striped
red-striped
Marygold, orange African
lennon ditto
fine quilled
dwarf French
tall ditto
striped ditto
new early dwarf
unique
Molucella levis

14

Stock, wall-leaved white
ditto purple
ditto scarlet
Sultan, sweet purple
white
yellow
Sycios angulata
Tagetes corymbosa
tenusifolia
Trachymene caerulea
Triteleia laxa
Xeranthemum, ann. white
purple
Xeranthemum, lucidum
(Elychrysium)
Zinnia elegans
coccinea
purpurea
grandiflora
fl. alba
multiflora, red
yellow
revoluta
tenusiflora
verticillata
grandiflora

TENDER ANNUALS,

Which require more than one Hot Bed to bring them to perfection, should be sown during the months of February and March.

Anarranthus, purple globe
white ditto
striped ditto
bicolor
tricolor
Balsam, fine double
French varieties
Browallia elata, blue
ditto, white
dentata
Canna angustifolia
coccinea
Indica
lutea
Capiteum, long red
yellow
oxheart
plant
Capeum, cherry
cayenne
tomatoe
bird pepper
Cleome spinosa
pentaphylla
rosen
Cockscomb, tall red
fine dwarf
branching
pyramidal
beautiful Chinese
yellow and buff
Cohorea, scarlet
Egg Plant, purple
white
Hedysarum gyrans
Heliotrope Indicum

15

<i>Heliotropium Peruvianum</i> Ice Plant	<i>Martynia proboscidea</i>
<i>Ipomoea coccinea</i> nfl.	<i>Mecombryanthemum corallifolium</i> , or purple Ice Plant
<i>Quamoclit</i>	Sensitive Plant
<i>Martynia annua</i>	<i>Stramonium</i> , double purple ditto white
BIENNIALS & PERENNIALS, NOT HARDY.	
<i>Alstrœmeria peligrina</i> ditto alba	<i>Calceolaria pendula</i> mixed varieties
<i>pulchella</i>	<i>Gloxinia formosa</i> speciosa
<i>Sinsil</i> aurea, and others	<i>Thunbergia alata</i> and many others
<i>Calceolaria suberecta</i>	

HARDY BIENNIAL & PERENNIAL FLOWER SEEDS.

To be sown from the beginning of April to the middle of June.

<i>Aconitum album</i>	<i>Aquilegia Canadensis</i> alpina
<i>Lycodotum</i>	<i>Argemone grandiflora</i>
<i>Nepellus</i> rubrum variegatum	<i>Astragalus alopecuroides</i> baccatus
<i>Agrostemma Flos Jovis</i>	<i>galegiflorus</i>
<i>Anemolium alatum</i>	<i>Astrantia</i> , species
<i>Anchusa sempervirens</i> incarnata	<i>Auricula</i>
<i>Anemone coronaria</i> narcissiflora	<i>Betonica grandiflora</i>
<i>Angellia grandiflora</i> Monelli	<i>Calceolaria corymbosa</i> many varieties
<i>Antirrhinum bicolor</i> pictum majus new scarlet new yellow	<i>Campion</i> , Rose
<i>Alyssum saxatile</i>	<i>Catananche caryophylla</i>
	<i>Campanula azurea</i> glomerata latifolia ditto alba percisailflora pyramidalis urticifolia

16

<i>Campanula varicolor</i>	<i>Eccremocarpos scaber</i>
<i>Canterbury Bells</i> , blue white	<i>Echium rubrum</i>
<i>Carantion</i> , fine double seedling various	<i>Sibericum</i> plantaginatum violaceum
<i>Celsia cretica</i> urticifolia	<i>Epilobium spicatum</i>
<i>Chelone</i> in varieties	<i>Eryngium alpinum</i> amethystinum planum
<i>Commelina coelestis</i> tuberosa	<i>Eschscholtzia californica</i> crœca
<i>Cobœa scandens</i>	<i>Francoa appendiculata</i>
<i>Columbine</i>	<i>Ferula tingitana</i>
<i>Cowslip</i> , in colours	<i>Flax</i> , perennial
<i>Convolvulus ciliatus</i> Scammonia	<i>Siberion</i>
<i>Cynoglossum pictum</i>	<i>Fraxinella</i> , red white
<i>Cyclamen</i>	<i>Gularia aristata</i> bicolor
<i>Dahlia</i> , fine double	<i>Galega officinalis</i> , white blue
<i>Delphinium azureum</i> elatum grandiflorum intermedium	<i>Gaura mutabilis</i>
<i>Dianthus alpinus</i> superbus	<i>Geranium</i> , from choice sorts Wallachianum
<i>latifolius</i>	<i>Gentiana acutis</i> asclepiadea crucata saponaria
<i>reclinatus</i>	<i>Geum album</i> coccineum
<i>Digitalis alba</i> aurea	<i>Quellion</i>
<i>ferruginea</i>	<i>Glaucium fultum</i> luteum
<i>grandiflora</i>	<i>Hesperis matronalis</i>
<i>latea</i>	<i>Heart's-ease</i>
<i>ochroleuca</i>	<i>Hemerocallis cœrulea</i>
<i>orientalis</i> rubra	<i>Hieracium aureum</i>
<i>Dracocephalum officinum</i> rescens pergrinum	

George C. Thorburn's Catalogue of Kitchen Garden, Herb,
Flower, Tree and Grass Seeds, New York: George P. Scott &
Co. Printers. 1838.

Annual Flower Seeds

6¢ per paper

China Aster, Early Dwarf

- white
- purple
- Anemone flowered
- Maiden's Blush
- Lilac
- Superb Quilled
- Bonnet
- Red Striped
- Purple Striped
- Blue
- New Crimson Turkey

Aster sinensis

- fl. albo
- fl. purpureo
- anemoniflora
- fl. incarnata
- fl. obsuro
- fl. superba
- var. nova
- rub. variegato
- pur. variegato
- cerulea
- fine var.

Celosia cristata

- Crimson Velvet
- Yellow

Clarkia elegansGilia capitata Azure Blue

- alba, white

Balsam

- Rose
- variegated
- Fire colored
- Purple
- Pure White
- Crimson

Impatiens balsamina

- fl. roseo
- variegata
- coccinea
- purpurea
- alba
- rubropleno

Sweet Peas

- Painted Lady Topknot
- Yellow
- White
- Black
- Purple
- Scarlet
- Striped
- Lord Anson's Peas
- Tangier Crimson Peas

Lathyrus odoratus

- flore carneo
- aphaca
- var. albo
- fl. obsuro
- fl. purpureo
- fl. roseo
- sativus
- fl. striata
- tingitanus

Thorburn List, 1838. continued

Mignonette

African Marigold

- Orange quilled
- French
- Ranunculus var.
- New Early Dwarf

Nasturtium, super large crimson

- Dwarf

Heartsease, Pansy

Zinnia, Great Flowering Red

- Yellow
- Violet

Reseda odorataTagetes erecta

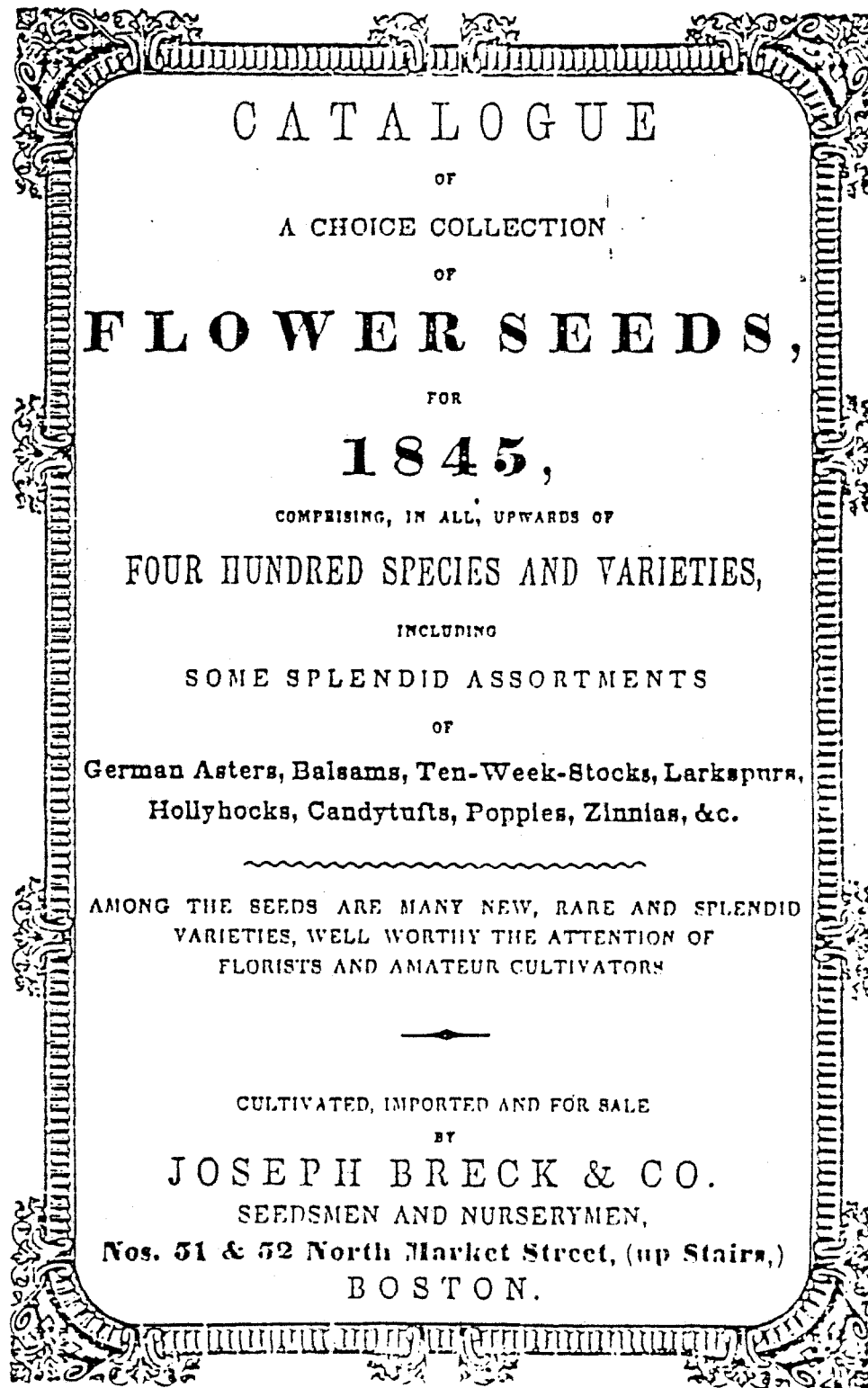
- fl. teretibus
- patula
- nova

Tropaeolum atrosanguinea

- var. nana

Viola tricolorZinnia multiflora grandiflora

- pauciflora
- elegans



CATALOGUE
OF
A CHOICE COLLECTION
OF
FLOWER SEEDS,
FOR
1845,
COMPRISING, IN ALL, UPWARDS OF
FOUR HUNDRED SPECIES AND VARIETIES,
INCLUDING
SOME SPLENDID ASSORTMENTS
OF
German Asters, Balsams, Ten-Week-Stocks, Larkspurs,
Hollyhocks, Candytufts, Popples, Zinnias, &c.

AMONG THE SEEDS ARE MANY NEW, RARE AND SPLENDID
VARIETIES, WELL WORTHY THE ATTENTION OF
FLORISTS AND AMATEUR CULTIVATORS

CULTIVATED, IMPORTED AND FOR SALE
BY
JOSEPH BRECK & CO.
SEEDSMEN AND NURSERYMEN,
Nos. 51 & 52 North Market Street, (up Stairs,)
BOSTON.

EXPLANATIONS.

The number under which each species or variety of Seed is sold—the Scientific Name—the Common Name—the Period of Duration of the Plant—Color of the Flowers—Height of the Plant—Period of Blooming—and Price per Packet, are all given in the Catalogue, as follows:—

1st Column.—Number under which each variety is sold—and under which orders are executed, the detail of the names being unnecessary.

2d Column.—Scientific or common name of the plants, agreeably to the remarks at the head of each Alphabetical List.

3d Column.—The same.

4th Column.—Hardiness and duration of each plant, viz:—h, *hardy*; hh, *half hardy*; l, *tender*; F, *fringe*; G, *green-house*; a, *annual* (1 year); b, *biennial* (lasts 2 years); p, *perennial* (last many years). They are thus applied in the Catalogue:—ha, *hardy annual*; hha, *half hardy annual*; la, *tender annual*; lb, *hardy biennial*; hlb, *half hardy biennial*; hp, *hardy perennial*; hhp, *half hardy perennial*, &c.

5th Column.—Color of the flower. The abbreviations are as follows:—var., *various*; sc., *scarlet*; cr., *crimson*; pur., *purple*; str., *striped*; yel., *yellow*; va., *variegated*; or., *orange*; b. & w., *blue and white*. &c.

6th Column.—Usual height in feet the plants generally attain under good cultivation.

7th Column.—Usual months of flowering.

8th Column.—Price of the seeds per single packet.

A star, *, added to the letters of the fourth column, denotes that the biennial and perennial plants flower the first year as well as the second.

A double star, **, following the scientific name, signifies that the plants are climbing, and suitable for an arbor, or trellis work.

TIME OF SOWING.—Hardy annuals from April to June, and many of the kinds in the autumn. Half hardy annuals in May, or earlier, in a *green-house* or a *hot bed*. Tender annuals in a *hot bed*, and transplanted to the border in June. Biennials and perennials from April to July.

ASSORTMENTS

or

SPLENDID FLOWER SEEDS,

Comprising superb Double German Asters, Balsams, Larkspurs, &c., raised by ourselves, and warranted to be of the most splendid description.

No.		Price.
1.	10 varieties of superb Double German Asters	50
2.	12 varieties of beautiful German Ten Week Stocks	62½
3.	4 varieties do. do. do.	25
4.	6 varieties of Sweet Peas	37½
5.	4 varieties of superb Double Balsams	25
6.	6 varieties Lupin	37½
7.	4 varieties of fine Double Poppies	25
8.	6 varieties splendid Lupin	62½
9.	4 varieties of Goodenias, handsomest colors	25
10.	12 varieties of splendid Larkspurs	62½
11.	10 varieties of fine Double Hollyhocks	50
12.	4 varieties of fine Candytuft	25
13.	4 fine Schizanthuses	25
14.	4 varieties of fine Zinnias	25
15.	20 varieties of Flower Seeds assorted kinds	1 00
16.	50 varieties do. do. do. do.	2 00

CATALOGUE.



The following plants, being best known by their common, or English names they are thus arranged in alphabetical order—and the scientific name given in the third column. A collection may be ordered, by merely giving the numbers and date of the Catalogue.

Number.	Common Name.	Scientific Name.	Duration of Plant.	Color of Flower.	Height in feet.	Period of Flowering	Price.
1	Adonis, Floe	Adonis vernalis	ha	scarlet	1	July, Aug.	6
2	Animated Oats	Avena sensitiva	ha	white	1	do	6
3	Aster, Chinese, mixed	Aster sinensis, var.	hhs	var.	2	Aug. Oct.	6
4	German, mixed	sp. and var.	"	var.	2	do	6
5	blue	cæruleus	"	blue	2	do	6
6	light blue	late-cæruleus	"	pale blue	2	do	6
7	red	almirabens	"	red	2	do	6
8	rose	roseus	"	rose	2	do	6
9	white	alba	"	white	2	do	6
10	ash gray	var.	"	ash	2	do	6
11	red and white	rubro albus	"	red & w.	2	do	6
12	blue and white	cæruleo albus	"	h. and w.	2	do	6
13	turkey	turcicus	"	red	2	do	6
14	early dwarf	nævus	"	var.	1	July, Sept.	6
15	Auricula, fine mixed	Primula auricula	hhp	var.	1	May, June	12
16	Annagallis, mixed	Annagallis, sp. and var.	ha	var.	1	July, Aug.	6
17	Balsam, fine mixed	Balsamina hortensis	ta	var.	2	July, Sept.	6
18	striped	striata	"	striped	2	do	6
19	rose	rosea	"	rose	2	do	6
20	scarlet	coccinea	"	scarlet	2	do	6
21	white	alba	"	white	2	do	6
22	ruby	var.	"	ruby	2	do	6
23	purple	purpureus	"	purple	2	do	6
24	new mottled	punctata var.	"	red & w.	2	do	12
25	crimson spotted	punctata var.	"	c. and w.	2	do	12
26	scarlet spotted	punctata var.	"	sc. & w.	2	do	12
27	purple spotted	punctata var.	"	pur. & w.	2	do	12
28	Chinese rose	sinensis rosea	"	rose	2	do	12
29	Cape Marigold	Calendula pinnatifida	ha	w. and p.	2	do	6
30	Candytuft, fragrant	Iberis odorata	"	white	1	June, Aug.	6
31	purple	umbellata	"	purple	1	do	6
32	Normandy	major	"	purple	1	do	6
33	new crimson	phœnicea	"	crimson	1	do	6
34	superb rocket	coroparia	"	white	1	do	6
35	white	amara	"	white	1	do	6
36	Calliopsis, golden	Calliopsis tinctoria	"	y. & pur.	2	June, Sept.	6
37	Drummond's	Drummondii	"	yellow	2	do	6
38	dark red	atro-sanguinea	"	y. and r.	2	do	6
39	Calceolaria, fine mixed	Calceolaria var.	hp	var.	2	May, Aug.	12
40	Carnation, mixed	Dianthus caryophyllol.	"	var.	2	June, Aug.	12
41	extra fine	var.	des	var.	2	do	25
42	Picotee	var.	"	var.	2	do	6

JOSEPH BRECK AND CO.'S CATALOGUE OF FLOWER SEEDS.

Number.	COMMON NAME.	SCIENTIFIC NAME.	Duration of Plant.	Color of Flower.	Height in feet.	Period of Flowering.	Price.
43	Carnation, extra fine	Dianthus var.	hp	var.	2	June, Aug.	25
44	Catchfly, Lobelia	Silene armeria	ba	red	1	do	6
45	large cluster'd	compacta	"	rose	1 1/2	do	6
46	white	alba	"	white	1	do	6
47	Casterbury Bell, blue	Campanula medium	hb	blue	2	June, Sept.	6
48	white	alba	"	white	2	do	6
49	Coxcomb, crimson	Celosia cristata	la	cr.	1 1/2	July, Sept.	6
50	yellow	lutea	"	yel.	1 1/2	do	6
51	Columbine, mixed	Aquilegia vulgaris	hp	var.	2	May, July	6
52	Siberian	Siberica	"	blue	1	do	6
53	Chrysanthemum, yell.	Chrysanthemum coro-	ba	yel.	2 1/2	July, Aug.	6
54	white	alba (varium)	"	white	2 1/2	do	6
55	tricolor'd	variegatum	"	3 col.	1	do	6
56	new golden	luteum	"	yel.	1	do	6
57	Chinese Primrose	Primula prae-nitens	bhp	purp.	1 1/2	July, Dec.	25
58	white	alba	"	white	1 1/2	do	25
59	Cypress vine,	Ipomoea Quamoclit	la	cr.	10	July, Sep.	6
60	Convolvulus, dwarf	Convolvulus minor	ba	bl. & wh.	1 1/2	July, Aug.	6
61	Cacalia, scarlet	Cacalia coccinea	"	sc.	1	do	6
62	new golden	lutea	"	yel.	1	do	6
63	Dahlia, finest mixed	Dahlia, var.	tp	var.	6	July, Oct.	12
64	Evening Primrose	Oenothera grandiflora	ba	yel.	3	July, Sept.	6
65	Egg Plant, purple	Solanum melongena	la	purp.	2	do	6
66	white	var.	"	white	2	do	6
67	Eternal Flower, golden	Elichebryum bracteatum	hha	purp.	2	do	6
68	new white	album	"	white	2	do	6
69	common purple	Xeranthemum annu-	"	yel.	1	do	6
70	common white	album (am)	"	white	1	do	6
71	Forget-me-not	Myosotis arvensis	ba	blue	1	July, Aug.	12
72	Fraxinella, purple	Dictamnus fraxinella	hp	red	2	June, Aug.	6
73	white	alba	"	white	2	do	6
74	Foxglove, purple	Digitalis purpurea	"	purp.	2 1/2	July, Sept.	6
75	white	alba	"	white	2 1/2	do	6
76	Globe Amaranthus	Gomphrena globosa	la	cr.	2	do	6
77	white	alba	"	white	2	do	6
78	striped	striata	"	str.	2	do	6
79	Gourd, bottle**	Cucurbita lagenaria	"	white	10	do	6
80	striped pear**	ovifera var.	"	yel.	10	do	6
81	orange**	saccharia	"	yel.	10	do	6
82	mandrake**	var.	"	yel.	10	do	6
83	Geranium (or Pelargo-	Pelargonium sp. & var.	gp	var.	2	April, June	25
84	nium) extra fine	Crepis barbata	ba	yel.	1	July, Aug.	6
85	Haw weed, golden	Viola tricolor	"	var.	1	May, Sept.	6
86	Heartsease, mixed	grandiflora	hb	var.	1	do	12
87	fine mixed	var.	"	var.	1	do	25
88	extra, from very fine	Hibiscus Africanus	ba	yel. & br.	1 1/2	July, Sept.	6
89	named flowers	palustris	bp	rose	4	June, Aug.	6
90	Hibiscus, African	Lablab vulgaris	hha	purp.	10	July, Sept.	6
91	swamp	alba	"	white	10	do	6
92	Hyalanthus, pur-	Lunaria biennis	hb	blue	1 1/2	July, Aug.	6
93	white** (ple**)	Althaea rosea	hp	var.	6	June, Sept.	6
94	Hollyhock, mixed	nigra	"	black	6	do	6
95	black	lutea	"	yel.	6	do	6
96	yellow	rosea	"	rose	6	do	6
97	rose	rubella	"	pink	6	do	6
98	pink	alba	"	white	6	do	6
99	white	sulphurea	"	sulph.	6	do	6
100	sulphur	coccinea	"	cr.	6	do	6
101	crimson	var.	"	mot.	6	do	6
102	mottled	Hemerocallis	la	white	1	do	6
103	Ice plant	Canna indica (sp.)	sc.	sc.	3	July, Aug.	6
104	Indian Shot	Scutellaria elegans	hha	purp.	1	July, Sept.	6
105	Jacobaea, purple	alba	"	white	1	do	6
106	white	purpurea	"	purp.	1	do	6
107	double purple						

JOSEPH BRECK AND CO.'S CATALOGUE OF FLOWER SEEDS.

Number.	COMMON NAME.	SCIENTIFIC NAME.	Duration of Plant.	Color of Flower.	Height in feet.	Period of Flowering.	Price.
107	Larkspur, dwarf rocket	Delphinium ajacis	hs	var.	1	June, Sept.	6
108	blue	caeruleum	"	blue	1	do	6
109	porcelain	var.	"	p. blue	1	do	6
110	white	album	"	white	1	do	6
111	rose	rosea	"	rose	1	do	6
112	branching mixed	Consolida var.	"	var.	2	July, Aug.	6
113	blue	caeruleum	"	blue	2	do	6
114	red	roseum	"	rose	2	do	6
115	Red	elatum	hp	blue	4	June, Aug.	6
116	Chinese	chinensis	"	blue	3	do	6
117	large flowered	grandiflora	"	blue	3	do	6
118	Lavatera, red	Lavatera trimestris	hs	rose	2	July, Sept.	6
119	white	alba	"	white	2	do	6
120	Love Lies Bleeding	Amaranthus caudatus	"	red	2	do	6
121	Lupins, mixed	Lupinus sp. and var.	"	var.	2	do	6
122	large blue	hirsutus	"	blue	2	do	6
123	rose	pilosus	"	rose	2	do	6
124	small blue	angustifolius	"	blue	2	do	6
125	yellow	luteus	"	yel.	2	do	6
126	white	albus	"	white	2	do	6
127	Marygold, French	Tagetes patula, pl. var.	hba	yel. & br	2	do	6
128	African	erecta	"	yel.	2	do	6
129	Marvel of Peru, mixed	Mirabilis dichotoma	ba	var.	3	July, Oct.	6
130	Blignoneite, sweet	Roseda odorata	"	white	1	June, Sept.	6
131	tree, or branching	var.	bb	white	1	do	6
132	Nasturtium, common	Tropaeolum majus	ba	yel.	6	do	6
133	dark red	atrosanguineum	"	cr.	6	July, Sept.	6
134	spotted	Shillingii	"	spot.	6	do	6
135	Peanut, sweet, mixed	Lathyrus odoratus var.	"	var.	6	do	6
136	striped	striatus	"	str.	6	Aug. Sept.	6
137	Painted Lady	pictus	"	var.	6	do	6
138	white	albus	"	white	6	do	6
139	black	niger	"	black	6	do	6
140	scarlet	coccineus	"	sc.	6	do	6
141	purple	purpureus	"	purp.	6	do	6
142	Tangerine	tingitanus	"	sc.	6	do	6
143	Everlasting	latifolius	hp	pink	6	June, Sept.	6
144	white	albus	"	white	6	do	12
145	Persicaria, red	Polygonum orientale	ha	red	6	do	6
146	Primula, fine mixed	Primula elatior var.	hp	var.	1	July, Sept.	6
147	Pink, fine clove, mixed	Diastylis moschatos	"	var.	1	June, July	6
148	annual Chinese	annuus	ha	var.	1	July, Aug.	6
149	Poppy, fine mixed	Papaver somniferum	"	var.	2	July, Sept.	6
150	superb fringed	simbricata	"	wh. & r.	2	do	6
151	Ranunculus	sinensis	"	var.	1	do	6
152	Phlox, perennial, mix'd	Phlox sp. & va. [driscus	hp	var.	3	do	6
153	Prince's Feather	Amaranthus hypochondriacus	ba	cr.	2	do	6
154	Petunia, white	Petunia nyctaginiflora	"	white	2	July, Oct.	6
155	purple	phoenicea	"	violet	2	do	6
156	fine mixed	var.	"	var.	2	do	12
157	Rocket, sweet	Hesperis matronalis	hp	purp.	2	July, Sept.	6
158	Rose Campion	Agrostemma githago	"	purp.	2	June, Sept.	6
159	Scabiosa, fine mixed	Scabiosa, var.	ha	var.	2	July, Sept.	6
160	purple	atropurpurea	"	purp.	2	do	6
161	Sensitive Plant	Mimosa sensitiva	la	pink	1	do	6
162	Snapdragon, fine mix'd	Antirrhinum majus	hp	var.	1	do	6
163	Stock, 10 w. fine mix'd	Matthiola annua var.	hba	var.	1	June, Sept.	6
164	scarlet	coccinea	"	sc.	1	do	6
165	white	alba	"	white	1	do	6
166	purple	purpurea	"	purp.	1	do	6
167	giant white	alba major	"	white	1	do	6
168	wall leaved white	var.	"	white	1	do	6
169	Stock, Ger. 10 w. mix'd	annua densiflora	"	var.	1	do	6
170	dwarf Carmine	minuta flore	"	var.	1	do	6
171	Mulberry	var.	"	mul.	1	do	6
172	new yellow	lutea	"	yel.	1	do	6

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Number	COMMON NAME.	SCIENTIFIC NAME.	Duration of Plant	Color of Flower.	Height in feet.	Period of Flowering.	Price.
173	Stock crimson	Matthiola kermesina	hba	cr.	1	June, Sept.	6
174	dwarf rose	rosea	"	rose	1	do	6
175	peach blossom	persicifolia	"	peach	1	do	6
176	violet	violacea	"	vio.	1	do	6
177	red	rubra	"	red	1	do	6
178	white	alba	"	white	1	do	6
179	chamois	var.	"	buff	1	do	6
180	dark	var.	"	dark	1	do	6
181	cinnamon	cineasomota	"	cio.	1	do	6
182	Stock, Queen, scarlet	incana	hbb	sc.	2	May, Sept.	6
183	purple	purpurea	"	purp.	2	do	6
184	white	alba	"	white	2	do	6
185	Stock, Brompton, scar.	simplicifolia	"	sc.	2	do	6
186	purple	purpurea (um	"	purp.	2	do	6
187	white	alba	"	white	2	do	6
188	Victoria	new var.	"	cr.	2	do	12
189	imperial	imperialis	hbp	red	2	do	12
190	Sweet Alyssum	Alyssum maritimum	ha	white	1	June, Sept.	6
191	Sweet Sultan, mixed	Centaurea var.	hha	var.	1	July, Sept.	6
192	purple	moschata	"	purp.	1	do	6
193	white	alba	"	white	1	do	6
194	yellow	suaevolens	"	yel.	1	do	6
195	new blush	crocodylum	"	fresh	2	do	6
196	Sweet William, mixed	Dianthus barbatus (um	bp	var.	1	do	6
197	Venus's Looking Glass	Prismatocarpus specu-	ha	blue	1	June, Sept.	6
198	Virginia stock	Malcolmia maritima	"	red	1	July, Sept.	6
199	Wallflower, blood	Cheranthus Cheiri	hbp	br.	1	May, Aug.	6
200	yellow	flava	"	yellow	1	do	6
201	double dark	dora pleno	"	dark	2	do	12
202	purple	purpurea	"	purp.	2	do	6

The following Seeds, with very few exceptions, have no popular or English name, and in consequence, the scientific names are arranged in alphabetical order. The names in the second column, by which they are often called, are mostly literal translations of the specific name: Example—Clarkia elegans, "elegant" Clarkia, &c.

Number	SCIENTIFIC NAME.	COMMON NAME.	Duration of Plant	Color of Flower.	Height in feet.	Period of Flowering.	Price.
203	Ageratum mexicanum	Mexican	ba	blue	1	July, Aug.	6
204	Alonsoa grandiflora	great-flowered	gp	sc.	1	June, Sept.	12
205	Amarantus tricolor	three-colored	ts	3 col.	1	July, Sept.	6
206	Argemone mexicana	Mexican	ha	white	3	do	6
207	orchroleuca	yellow	"	yel.	3	do	6
208	Athanasia annua	annual	"	yel.	1	do	6
209	Bartonia aurea	golden	"	yel.	1	do	6
210	Brachycome theridifolia	Swan River Daisy	hha	blue	1	do	25
211	Browallia elata (lis	blue	ta	blue	1	do	6
212	Campanula pyramida-	pyramidal bell-flower	hbp	blue	4	June, Sept.	12
213	alba	white	"	white	4	do	6
214	sp. & var.	mixt perenn. sort	hp	var.	2	do	6
215	Loreii	Lore's	ba	blue	1	do	12
216	Centaurea americana	American	"	red	3	Aug. Sept.	6
217	Cladanthos arabicus	Arabian	"	yel.	1	July, Aug.	6
218	Clarkia elegans	elegant	"	lil.	1	July, Sept.	6
219	rosea	new rose	"	rose	1	do	6
220	pulchella	pretty	"	lil.	1	do	6

JOSEPH BRECK AND CO.'S CATALOGUE OF FLOWER SEEDS.

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Number.	SCIENTIFIC NAME.	COMMON NAME.	Duration of Plant.	Color of Flower.	Height in feet.	Period of Flowering.	Price.
221	Clarkia alba	white	hs	white	1	July, Sept	6
222	Calampelis scruba**	climbing	hbp	or.	10	do	6
223	Clintonia grandiflora	great-flowered	ha	rose	4	do	6
224	Clintonia elegans	elegant	"	bl. & wh	1	do	6
225	punchella	pretty	"	bl. & wh	1	do	12
226	Colea scariosa**	Mexican	gp	purp.	10	Aug. Sept	12
227	Collinsia bicolor	two-colored	ha	wh. & p.	2	July, Aug	6
228	heterophylla	various-leaved	"	wh. & p.	2	do	6
229	Calceolaria grandiflora	large-flowered	"	p. & red.	1	July, Sept	6
230	discolor	two-colored	"	rose	1	do	6
231	Cassia Marylandica	Maryland	hp	yel.	4	June, Sept	6
232	Commelina caerulea	sky-blue	ha	blue	1	July, Aug.	6
233	Cophea silenoides	Silene-like	ha	purp.	2	do	12
234	Dahlia repens	creeping	hha	var.	1	do	12
235	Didiscus cœruleus	blue	"	blue	2	do	12
236	Digitalis aurea	golden	hp	or.	2	do	6
237	lutea	yellow	"	yel.	2	do	6
238	bicolorata	two-colored	"	white	3	do	6
239	Dracocephalum altaiense	Altai	"	blue	1	June, Aug	6
240	Elichrysium macranthum	large flowered	hha	pink	2	July, Aug.	6
241	Erysimum Peroffskyi	Peroffsky's	ba	yel.	2	July, Sept	12
242	Eutoca viscidiflora	One blue	"	blue	1	do	6
243	Gaillardia Richardsonii	Richardson's	hp	yel.	2	do	6
244	Gilia capitata	bunch-flowered	ha	blue	2	do	6
245	tricolor	three-colored	"	3 col.	1	do	6
246	Godetia bifrons	two-fronted	"	p. & c.	1	do	6
247	coccinea	red	"	p. & r.	1	do	6
248	Lindleyana	Lindley's	"	wh. & r.	1	July, Sept.	6
249	quadrivulnera	four-spotted	"	spot	1	do	6
250	Romanzowii	Romanzow's	"	pur.	1	do	6
251	rosea	rose colored	"	rose	1	do	6
252	rosea alba	rose and white	"	r. & w.	1	do	6
253	rubiconda	flushing	"	purp.	1	do	6
254	viminea	twiggly	"	bl.	1	do	6
255	vinea	wine colored	"	purp.	1	do	6
256	Willdenowii	Willdenow's	"	flesh	1	do	6
257	Helenium Douglasii	Douglas's	"	yel.	1	July, Aug	6
258	Helianthus arborescens	Arabis-like	"	blue	1	do	12
259	Impatiens candida	white	ha	white	3	July, Sept	12
260	Ipomœa cœrulea**	scar. Morning-glory	ha	sc.	10	July, Oct	6
261	rutila cœrulea**	sky blue	gp	blue	10	do	25
262	Nil**	blue	ha	blue	10	do	6
263	Lasthena californica	California	"	yel.	1	July, Aug	6
264	Leptosiphon and rosea	long-tubed	"	bl.	1	do	6
265	densiflorus	dense-flowered	"	var.	1	do	6
266	Limanthes Douglasii	Douglas's	"	yel.	1	do	6
267	Lisianthus Russcœlliana	Duke of Bedford's	hbp	purp.	1	June, Sept	25
268	Lissa Pentlandica	Mr. Pentland's	ha	yel.	6	do	12
269	Lobelia gracilis	graceful	"	blue	1	July, Oct.	6
270	cardinalis	Cardinal flower	hb	sc.	1	June, Aug	6
271	Lophospermum scandens**	climbing	ha	rose	10	July, Oct.	12
272	atrorubiginosum	dark red	"	cr.	10	do	12
273	Lotus jacobæus	dark flowered	ha	black	1	do	12
274	Lupinus Cruikshankii	Cruikshank's	ha	var.	2	do	12
275	durus	dwarf,	"	p. & bl.	1	do	6
276	Hartwegii	Hartweg's	"	h. & w.	1	do	12
277	polyphyllus	many-leaved	hp	blue	3	June, Aug.	6
278	alba	white	"	white	3	do	6
279	Lychnis chalcœdonica	scarlet	"	sc.	2	do	6
280	œrlii rosea	Rose of Heaven	ha	flesh	1	do	6
281	Malaria elegans	elegant	"	yel.	2	July, Sept	6

10 JOSEPH BRECK AND CO.'S CATALOGUE OF FLOWER SEEDS.

Number	Scientific Name.	Common Name.	Duration of Plant.	Color of Flower.	Height in feet.	Period of Flowering.	Price.
282	<i>Malope grandiflora</i>	large-flowered	ha	cr.	2	July, Sept.	6
283	<i>alba</i>	white	"	white	2	do	6
284	<i>Malva elegans</i>	elegant	"	sc.	2	do	6
285	<i>zebrina</i>	striped	"	str.	2	do	6
286	<i>Martynia fragrans</i>	fragrant	la	var.	2	do	12
287	<i>Maurandia Barclayana</i>	Barclay's	hha	purp.	10	July, Oct.	12
288	<i>semperflorans</i> **	ever-flowering	"	rose	8	do	12
289	<i>Mimulus</i> , sp. & var.	fine mixed	"	var.	1	June, Aug.	12
290	<i>Nemophila atomaria</i>	white spotted	"	w. spot	1	July, Oct.	6
291	<i>discoidalis</i>	white bordered	"	black	1	do	25
292	<i>insignis</i>	beautiful blue	"	blue	1	do	6
293	<i>Nolana striplacifolia</i>	large blue	"	blue	1	do	6
294	<i>Oenothera macrocarpa</i>	long-fruited	hp	yel.	1	May, Aug.	6
295	<i>tetrapetala</i>	white	ha	white	1	July, Sept.	6
296	<i>Oxyria chrysanthemoides</i>	Chrysanthemum-like	"	yel.	1	do	6
297	<i>Papaver orientale</i> (des)	Oriental poppy	hp	sc.	2	May, June	6
298	<i>Pentstemon</i> , mixed	fine mixed	"	var.	2	June, Aug.	6
299	<i>Phacelia tanacetifolia</i>	Tansy-leaved	ha	blue	1	July, Sept.	6
300	<i>Phlox Drummondii</i>	Drummond's annual	bha	var.	1	July, Oct.	12
301	<i>Portulaca splendens</i>	splendid	"	cr.	1	do	12
302	<i>Thellusonii</i>	Thelluson's	"	sc.	1	July, Oct.	22
303	<i>Potentilla formosa</i>	handsome	bp	rose	1	June, Aug.	6
304	<i>astromanguinea</i>	dark red	"	cr.	1	do	6
305	<i>Rodanthe Manglesii</i>	Mr. Mangle's	hha	rose	1	July, Sept.	12
306	<i>Redberkia simplex</i>	stem-clasping	ha	yel.	1	do	6
307	<i>lasciniata</i>	yellow	hp	yel.	2	June, Sept.	6
308	<i>Salpiglossis</i> , fine mixed	fine-mixed	hha	var.	1	July, Sept.	12
309	<i>Salvia coccinea</i>	scarlet	hhp	sc.	2	June, Oct.	12
310	<i>splendens</i>	scarlet	"	sc.	3	do	12
311	<i>palea</i>	fine blue	"	blue	3	do	25
312	<i>Schizanthus pinnatus</i>	pinnate leaved	ha	l. p. y.	1	July, Sept.	6
313	<i>dwarf</i>	dwarf	"	l. p. y.	1	do	6
314	<i>porrigens</i>	spreading	"	l. p. y.	1	do	6
315	<i>Priestii</i>	Priest's	"	white	1	do	6
316	<i>polcbella</i>	pretty	"	wh. & pur	1	do	12
317	<i>venustus</i>	beautiful	"	dark	1	do	6
318	<i>retusus</i>	blunt-leaved	"	cr. & yel.	1	do	12
319	<i>Schizopetalon Walkerii</i>	Walker's	hha	white	1	do	12
320	<i>Silene regia</i>	scarlet	bp	sc.	1	June, Sept.	12
321	<i>Sophora japonica</i>	Japan	hp	purp.	2	do	6
322	<i>Stevia serrata</i>	sweet-scented	ha	white	1	July, Sept.	6
323	<i>Thunbergia alata</i> **	winged	la	buff	6	July, Oct.	12
324	<i>alba</i> **	white	"	white	6	do	25
325	<i>sorantiana</i> **	orange	"	or.	6	do	25
326	<i>Barkerii</i> **	Mr. Barker's	"	white	6	do	25
327	<i>Tropaeolum peregrinum</i> **	Canary-bird flower	"	yel.	10	July, Sept.	12
328	<i>Verbena Aubletia</i>	Mr. Aublet's	ha	bl.	1	July, Oct.	6
329	<i>venosa</i>	veined	bbp	bl.	1	do	6
330	<i>var. & sp.</i>	extra fine mixed	"	var.	1	do	25
331	<i>Zinnia elegans</i>	elegant	bha	vio.	2	July, Sept.	6
332	<i>alba</i>	white	"	white	2	do	6
333	<i>coccinea</i>	scarlet	"	sc.	2	do	6
334	<i>var.</i>	fine mixed	"	var.	2	do	6



General Directions for the Management of Annual, Herbaceous and Climbing Plants.

Annual Flower Seeds should be sown during the month of May, on borders of *light, rich earth, very finely pulverized*: the borders having been previously well dug, arrange with a trowel small patches therein, about six inches in width, at moderate distances, breaking the earth well, and making the surface even: draw a little earth off the top to one side, then sow the seed therein, each sort in separate patches, and cover with the earth that was drawn off, observing to cover the small seeds less than a quarter of an inch deep, the largest in proportion to their size: but the sweet pea and bean kinds must be covered one inch deep. When the plants have been up some time, the larger growing kinds should, where they stand too thick, be regularly thinned, observing to allow every kind according to its growth, proper room to grow.

As a general principle, almost everything that grows, thrives best in a rich soil: there are a few exceptions, but they are so trifling, that this rule may be laid down for all practical purposes; therefore make your ground rich; decayed vegetable matter from the woods is best for a flower garden: dig and turn it well over, and make it level; then rake it smooth; if it is well dug, it will be perfectly level, therefore the raking is necessary to make it smooth and fine.

As the stalks of flowering plants shoot up, they generally require thinning, and props for support; and the blossom of a plant or shrub, no sooner expands than it begins to wither, and must be cut off, unless, as in some of the ornamental shrubs, they are left for the sake of the beauty of their fruit.

Always water your plants in the evening—the water then has time to sink into the earth and be imbibed by the plants during the night.

Summer Flowering Bulbs, Dahlias and Plants, for Planting in May.

Gladiolus natalensis, yellow and crimson, showy, each	\$ 20
— cardinalis, scarlet, splendid, each	37 1/2
— floribundus, pink with dark lines, beautiful, each	37 1/2
— ramosus, blush, new and very fine, each	1 00
Amaryllis formosissima, velvety crimson, superb, each	25
Tigridia paronia, light red, spotted, each	12 1/2
— conchiflora, yellow spotted, each	25
Tuberose, fine double white, very fragrant, each	25
Commelina tuberosa (or celestis,) fine blue, each	12 1/2
Paeonies, of all the finest double varieties, each	50 to 1 00
Dahlias, upwards of 200 varieties, including the finest new ones to be obtained	
in England, a Catalogue of which is annually published:—per doz. \$2 00 to 8 00	
Carnations, extra fine and good varieties, each	25 to 50
Picotees, extra fine, with white and yellow grounds, each	25 to 50
Pinks, fine double sorts, clove scented, &c, per dozen	2 00
Verbenas, (in 20 varieties) for turning out into the border, per dozen	2 00
Chinese Roses, of dwarf kinds for planting in masses, per dozen	3 00
Hardy Herbaceous Plants, in twelve different handsome sorts, per dozen	3 00

Garden Tools and Implements of every description.—Such as Spades, Shovels, Forks, Hoes, Dutch Scuffles, Verge Cutters, Rakes, Garden Rerls and Lines, Trowels, Grass Shears, Pruning Shears, Pruning Saws, Pruning Knives, Budding Knives, Grape Scissors, Syringes, &c. &c. Russia Mats of the best quality.

APPENDIX II

A CHRONOLOGICAL DOCUMENTATION OF ANNUALS THROUGH THE TRADE

Explanatory notes for Appendix information:

1. The annuals are listed alphabetically by genus. To locate them by their common names, see Index.

2. Descriptions from Hortus Third are abbreviated with emphasis on flower color and form and the plants general habit. Because current epithets often differ from those found within the time frame of this study, this information is also useful in bringing the reader up to date.

3. Time intervals vary with each annual. They are based on the time lapses between significant developments in the trade with respect to the particular plant in question.

4. Common and Latin names are as they appeared in the original lists, including misspellings or inaccuracies.

5. Descriptions appear in the language of the catalogues. Technical inaccuracies are included, such as the term variety for cultivar, reference to Composites with "double" flowers or "petals" rather than florets, etc.

6. Descriptions not in quotes are condensed from original versions found in several catalogues; superlatives are generally omitted for brevity.

7. Quoted material is included to indicate specific views and statements made by particular seed firms or individuals. Citations follow in parentheses. Catalogue page numbers, here and throughout the thesis, are omitted when references appeared in alphabetical order.

8. Flower colors are not capitalized except when they were cultivar names (i.e., Snow White, Peach Blossom, etc.).

9. Initials following each entry are abbreviations for seed firms. They should not be considered the only source offering the form listed, but rather the author's initial discovery of the cultivar.

A key to these sources follows:

J.B.	Joseph Breck & Company
T.B.	Thomas Bridgeman
W.A.B.	W. Atlee Burpee Company
J.H.	Joseph Harris Company
P.H.	Peter Henderson & Company
C.M.H.	Charles M. Hovey
D.L.	(David) Landreth's Seed Company
J.T.	J. M. Thorburn & Company
J.V.	James Vick & Sons
T.W.W.	T. W. Wood & Sons

Abronia sp. (SAND VERBENA)

Nyctaginaceae

Descriptions from Hortus Third:

Abronia arenaria, now A. latifolia -- flowers lemon-yellow; prostrate. Coast of CA to British Columbia.

A. umbellata -- calyx rose or rarely white; prostrate. Commonly cultivated. Coast of CA to B. C.
 cv. 'Grandiflora' -- flowers larger.
 'Rosea' -- flowers pale.

A. fragrans -- flowers white, night-blooming. B. C. to n. Mex.

A. villosa -- similar to A. umbellata but annual.
var. villosa -- calyx purplish-rose, opaquely winged with coarse veins. NV and CA, s. to AR and Baja CA. Desert.

1865-1868

A. umbellata: "a fine half hardy annual, with clusters of sweet-scented flowers, resembling the Verbena; rosy lilac; 6 inches in height. Fine for baskets and desirable in the garden." Vick, 1865. (J.B., C.M.H., J.V., P.H.)

crux maltae: noted as a new introduction by C. M. Hovey, "The flowers . . . are in axillary heads on long peduncles, of a deep purplish rose color, the throat swollen and of a bright emerald green, while the tube is pink or flesh color. It was detected in the Carson Valley, Washoe, and first known in 1860." (C.M.H., Feb. '68, p.42) Described by W. Robinson (The English Flower Garden, 1883 ed.) as "a pretty species with white flowers and sweetly scented."
 Not common in the trade.

1869-1872

A. arenaria: pure waxy-yellow, scented, new. (P.H.)
fragrans: white. (J.V.)

1873-1880

A. umbellata most commonly offered (J.B., J.H., P.H., D.L., J.V., W.A.B)

arenaria: offered in catalogues with more extensive lists. (P.H., J.B., J.V.)

fragrans: P.H. offered as a novelty in 1880; snow white, vanilla fragrance.

1881-1900

Landreth's began to stop listing Abronias.

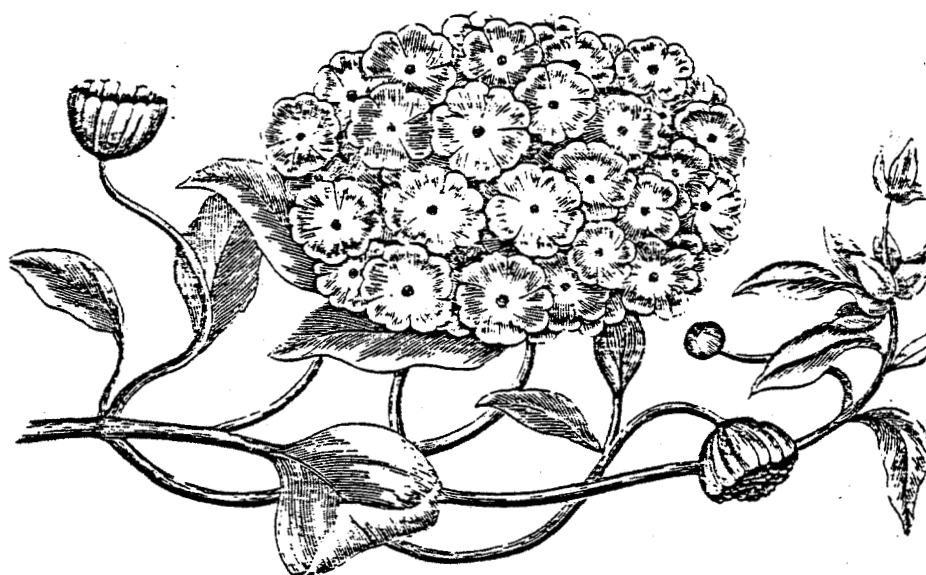
A. umbellata grandiflora: large flowered. (J.B.)

villosa: purple. (J.B.)

umbellata: still offered by above firms as well as J.T., W.A.B.

1901-1914

Abronias begin to appear in the back pages of catalogues as specialty plants. Recommended for borders, rockeries, baskets.



ABRONIA UMBELLATA

James Vick, 1865.

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