

Carnations and the Floriculture Industry: Documenting the Cultivation and  
Marketing of Flowers in Colorado

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**ABSTRACT.** The Records of the Colorado Flower Growers Association (CFGGA) is an archival collection documenting the association prior to its 1979 name change. The CFGGA was founded in 1928 to support the production and marketing of greenhouse flowers grown commercially in the state. In 1979, the organization changed its name to the Colorado Greenhouse Growers Association to reflect the increasing diversification of the industry. The collection consists of documents dated 1928 to 1980 (with the bulk falling between 1958 and 1972), and includes minutes from general, board and committee meetings, correspondence, newsletters, financial reports, scrapbooks, clippings, and photographic materials. This article provides a history of Colorado carnations, information on the collection, and describes a digital project supported by a cooperative agreement between the Agriculture Network Information Center (AgNIC) and the Colorado State University (CSU) Libraries to make a selection of the scrapbooks, clippings,

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newsletters, and photographic materials available online to researchers through the AgNIC Web site. In addition to providing access to over 500 digital images, project staff developed important metadata to facilitate their discovery, retrieval, and management using the Standard NAL Metadata and the *Collaborative Digitization Project (CDP)'s CDP Dublin Core Metadata Best Practices*.

**KEYWORDS:** carnations, Colorado, flowers, floriculture industry, Colorado Flower Growers Association, CFGA, digital collection, digital project

### ***HISTORY***

The carnation, *Dianthus caryophyllus*, originated from a plant that grew wild on the hillsides of ancient Greece. The Greek botanist Theophrastus (ca. 372–286 BCE) assigned the name *dios anthos*; “dios” (referring to the god Zeus) and “anthos” (flower), which translates as “flower of the gods” or “divine flower.” Carnations were introduced to the United States from Europe during the early nineteenth century. The flower that has come to be known as the American Carnation was developed from a strain cultivated in France, registered in 1842, and brought to the United States in 1852 by a grower in Long Island, New York.<sup>1</sup> Within twenty years, the Long Island company of Dailedouze, Zeller and Gard had printed a catalog offering fifty-four varieties of carnations.<sup>2</sup>

As Americans and European immigrants began moving westward in the ensuing decades, they brought their favorite flowering plants with them. Colorado, with its high altitude climate of sunny days and cool nights, would prove to be an excellent environment in which to cultivate carnations. The construction of an irrigation ditch in 1872 brought much-needed water from the

Platte River Canyon into Denver, further encouraging the development of the floral industry in the “Mile High City.” In 1879, Park Floral Company was started in east Denver by John A. Valentine, who later became a national leader in the floral business, serving as the first president of *Florists Telegraph Delivery* (FTD) from 1910 until 1912.<sup>3</sup>

During the 1880s, the Denver floral industry grew rapidly, accompanied in the following decade by the construction of greenhouses. “Hot houses” had become popular among flower growers in the eastern states, who met in Philadelphia, Pennsylvania in 1891 to organize the American Carnation Society.<sup>4</sup> Although carnations can be grown successfully outdoors in milder climates, the greenhouse allowed producers to bring the plants indoors at the end of the summer in regions subject to freezing winter temperatures. The first greenhouse known to have been built in Denver was constructed in 1891 at the Treats estate, near Seventh and Larimer streets. By 1900, approximately 400,000 square feet of greenhouse glass had been installed in Denver-area nurseries.<sup>5</sup>

In the early days of the Colorado floral industry, retail flower shops bought flowers from the greenhouse growers and delivered them by horse-drawn carriages. The carriages were warmed by charcoal heaters in the winter to keep the flowers from freezing. The first “horseless carriage” floral delivery truck used in Denver was purchased by the Elitch-Long flower store in 1910.<sup>6</sup>

The shipment of carnations to buyers outside Colorado began in the early 1900s. One of the earliest shippers, Pikes Peak Floral in Colorado Springs, sent flowers to the neighboring states of Utah, Texas, and Kansas. The marketing of carnations moved from individual grower sales toward cooperative efforts in 1909 when N. A. Benson started the Denver Wholesale Florists. This organization helped to standardize carnation prices and quality, and provided an organized system for moving the flowers from grower to wholesaler to retailer to customer.<sup>7</sup>

Colorado carnation production gained national attention in 1921, when George Brenkert of the Washington Park Floral Company entered a new variety of shell-pink flower called the “Denver” in the National Flower Show in Washington, D.C., and won a bronze medal. That year, a hundred of the new “Denver” carnations were sent to the White House for Mrs. Warren G. Harding on Inauguration Day.<sup>8</sup>

The Colorado Flower Growers Association (CFGGA) was founded in 1928 to support the production and marketing of greenhouse flowers and plants grown commercially in the state. The CFGGA accomplished this goal through vigorous promotion of greenhouse products, cooperative group action, and financial support of plant research. In 1949, in cooperation with horticultural researchers at the Colorado Agricultural and Mechanical College (which would become Colorado State University in 1957), the Colorado Flower Growers Association began publishing carnation research information in a monthly bulletin.

In order to increase control over quality, prices, supply and demand in the local flower market, the growers voted to organize the Colorado Flower Growers Cooperative Association in 1933. Members of the CFGGA entered into contractual agreements to sell their products through the cooperative rather than directly to retailers. This cooperative became inactive a few years later, but was revived in 1947.

Called by several names after its inception, including the Colorado State Flower Growers, the Colorado State Florists Association, and the Colorado Growers Association, the association established its official name as the Colorado Flower Growers Association in 1956. Initially, the members of the CFGGA cultivated carnations as their major flower crop, and by the middle of the twentieth century, Denver had become known as the “Carnation Capital” of the world.

Despite the challenges of rising fuel costs for heating and cooling greenhouses during the oil

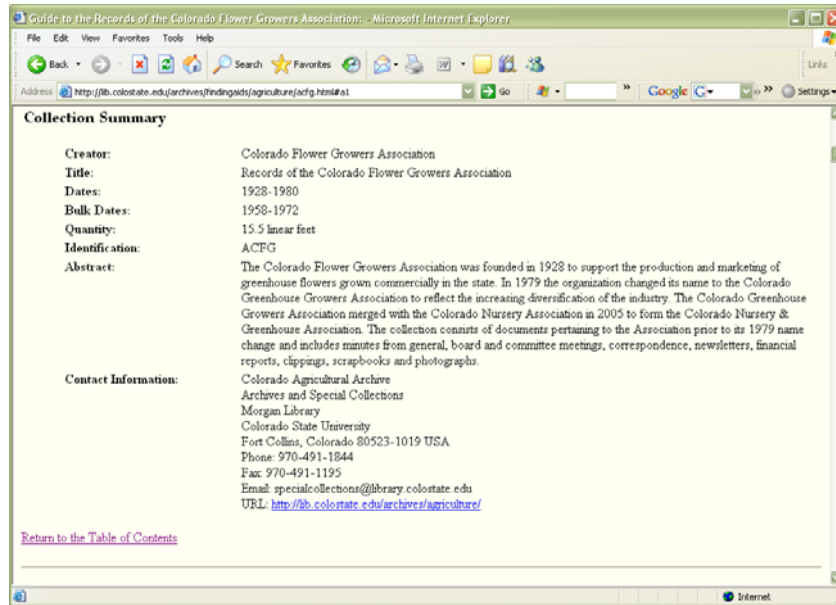
embargoes of the 1970s, in 1974 Colorado was the number-one producer of carnations worldwide.<sup>9</sup> However, within a few years, Colorado growers faced tough competition from carnation producers in Colombia, who had the advantage of more moderate climate, cheap labor costs and favorable trade agreements with the United States, fostered by the American government's desire to encourage Colombia to export legal crops rather than cocaine.<sup>10</sup>

The emphasis of CFGA producers soon shifted from carnations to other cut flowers and potted plants. Currently, the majority of carnations and other cut flowers grown in the US are now produced in California. Colorado's flower-growing efforts focus on roses and specialty plants such as poinsettias. The name of the association was changed in 1979 to the Colorado Greenhouse Growers Association to reflect the increasing diversification of the industry, and in 2005, the Colorado Greenhouse Growers Association merged with the Colorado Nursery Association to form the Colorado Nursery & Greenhouse Association.

### ***CFGA COLLECTION***

The Records of the Colorado Flower Growers Association, consisting of documents dated from 1928 to 1980 (with the bulk of the materials falling between 1958 and 1972), was donated to the Colorado Agricultural Archive on June 9, 1981, by Dick Kingman, Executive Director of the Colorado Greenhouse Growers Association. The collection includes minutes from meetings of the association, the board of directors, and several committees, as well as correspondence, newsletters, financial reports, scrapbooks, clippings, and photographs. Archival processing of the collection was completed in 2005, and a finding aid is available online<sup>11</sup> to assist the researcher in locating specific documents within the collection (see Figure 1).

FIGURE 1. Online Finding Aid for the Records of the Colorado Flower Growers Association



Courtesy of the Records of the Colorado Flower Growers Association, Colorado State University Libraries.

Major topics of interest include advertising and publicity for Colorado carnations and the creation of a trademark, research in propagation, cultivation, and tinting of carnations, flower shipping via airlines, and relationships of the CFGA with other florist organizations. Two individuals mentioned frequently in the collection are horticulture professor W. D. “Bob” Holley and Ralph “Tex” Baker, professor of plant pathology. Their research, supported by CFGA grants to Colorado State University, contributed significantly to the industry.

### ***THE PROJECT***

The project was initiated by a cooperative agreement between the Colorado State University (CSU) Libraries and the Agriculture Network Information Center (AgNIC), a voluntary alliance of nearly sixty member institutions and organizations working to offer quick and reliable access to quality agricultural information and sources. AgNIC is supported, in part, by the USDA’s National Agricultural Library (NAL) through provision of the AgNIC Secretariat.<sup>12</sup> CSU Libraries are active in local and regional digitization efforts and possess technical and

administrative expertise as well as related hardware and software. The project's objective was to digitize selected items from the CFGA collection and deliver full text and images associated with metadata to researchers via the Internet. The mutual benefits include increasing quality agricultural content offered by AgNIC and maximizing access to the distinctive historical materials for research purposes.

The Libraries' project team included an archivist, a digital content librarian (principal project investigator), the Coordinator of Digital Repositories Services (co-principal project investigator), a library technician, and an information technology Web specialist. In addition, an agriculture subject librarian, the Coordinator of Metadata and Preservation Services, a metadata librarian, and the Assistant Director for Development and Communication served as project consultants. The staff (see Appendix 1) from the Libraries worked closely with the AgNIC Coordinator through the principle project investigator in project execution and content delivery.

The cooperative agreement included an estimate of eight to twelve months to complete the project. The activities of the project were outlined in four major areas: (1) digitization, including material selection and preservation assessment; (2) metadata creation; (3) Web site development; and (4) marketing and promotion.

Upon execution of the project, the principal investigator and co-investigator developed a project description document (PDD). This document outlined the scope, objective, major deliverables, work breakdown, success criteria, schedule, risk assessment, and risk management for the project. A Gantt chart was developed using the Microsoft Project software to visualize task ownership and duration. The PDD and the Gantt chart provided a blueprint for the project. The principal investigator also met with the project team and other personnel to review the PDD and establish a common vision among constituents.

Project completion took an additional four months beyond the expected time due to staff time limitations. The project was funded for the first twelve months as specified in the cooperative agreement. By the time the Web site was launched, the team had successfully met the primary project goal to develop, maintain, and make available a historical digital collection of primary resource materials on Colorado carnations, CFGA, and the related floriculture industry. Metadata based on the Standard NAL Metadata and the Collaborative Digitization Project (CDP)'s *CDP Dublin Core Metadata Best Practices* had also been developed to facilitate the discovery, assessment, and management of these primary resources.

### ***DIGITIZATION***

Items digitized include selections from three series of the Records of the Colorado Flower Growers Association and two research bulletins (not part of the series) published by the Association. The Scrapbooks and Clippings series (Series VII) includes twelve large scrapbooks, ten file folders, and the production record for a book on carnation arrangement published by the Association. This series features news articles, certificates, programs, and other memorabilia as well as tear sheets (carnation advertisements) provided to periodicals for publication. The Photographic Material series (Series VIII) offers black-and-white publicity photographs, negatives, color prints and color slides demonstrating the care and arrangement of carnations. The Newsletters and Press Releases series (Series III) includes monthly newsletters of the CFGA as well as occasional press releases announcing annual meetings, elections, scholarships, greenhouse and research facility tours and competitive shows.<sup>13</sup> The research bulletins—donated to the archives by Professor Steven E. Newman of the CSU Department of Horticulture and Landscape Architecture—publicize carnation and related greenhouse research by university faculty and graduate students. This research was funded in large part by the CFGA. The selected



bulletins are the first and last issues of over four hundred published between 1949 and 1989.

Before digitization, the selected materials were assessed by the Coordinator of Metadata and Preservation Services for physical condition, preservation needs, and readiness for scanning. Personnel from the Library Technology Services provided potential options for a digital storage location for the scanned items. Since the Libraries already possessed relevant staff expertise and experience from previous digitization efforts,<sup>14</sup> it was decided to scan the materials in-house. The digitization process followed *Western States Digital Imaging Best Practices* (version 1.0, available online).<sup>15</sup>

The formats of materials selected for scanning include graphic materials, photographs, color slides, filmstrips, and text. Before scanning, file naming conventions were discussed. Based on previous experience and consideration of future needs, it was decided to use the initials of the project plus a five digit number to uniquely identify each file within the collection and to distinguish it from other local digital collection items. A sample of scanning based on the Best Practices was conducted to ascertain exactly what was needed to obtain the best possible image quality for each format.

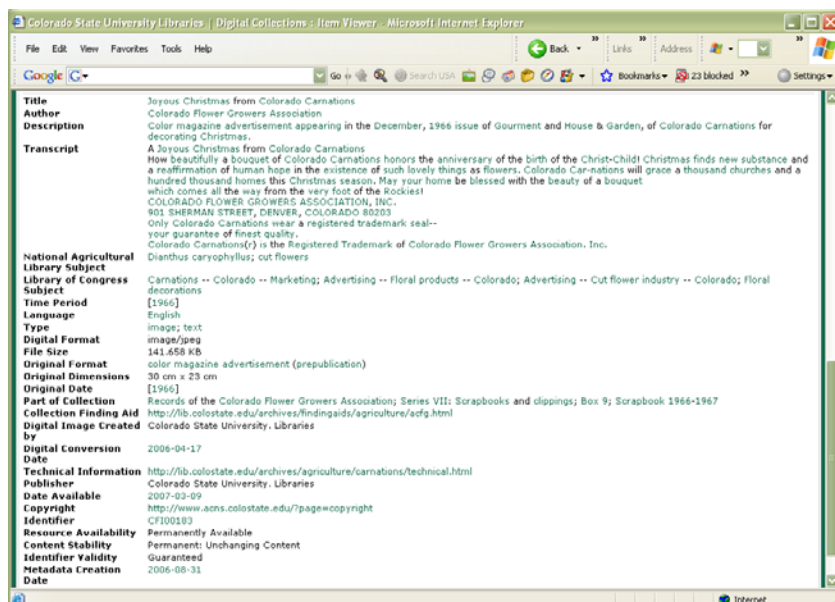
Through consultation with the AgNIC Coordinator, consensus was reached with the funding agency concerning digitization standards. Locally, the TIFF format was used as the digital master for all image files according to the Best Practices. The Adobe Photoshop Elements 2.0 software was utilized to create access JPEG images, since Photoshop offers more flexibility to specify access image size and resolution than the built-in functionality of the CONTENTdm software.<sup>16</sup> Scansoft OmniPage Pro 14 software was selected for optical character recognition (OCR) to extract the full text of textual materials, and the results were saved in .txt files. The text files were later made available with images and metadata through CONTENTdm (version 4.0),

the digital collection management software which the CSU Libraries had adopted locally to provide public access to CSUL digitized resources and to facilitate full-text searching.

## ***METADATA***

The metadata was created based on the Standard NAL Metadata (Final 10/012001) and the *CDP Dublin Core Metadata Best Practices* (version 2.1.1, available online)<sup>17</sup> (see Figure 2). Standard NAL Metadata information was acquired from the AgNIC Coordinator, who also provided a set of proposed metadata elements and a sample metadata record from an NAL Animal Images Project, a more recent application of the Standard NAL Metadata. The *CDP Dublin Core Metadata Best Practices* was created by a consortium of eight Western states to provide metadata guidelines for digital cultural heritage resources, and is accepted by local and regional institutions as a standard for metadata creation for digital objects.

FIGURE 2. A Metadata Record from the Collection (Joyous Christmas)



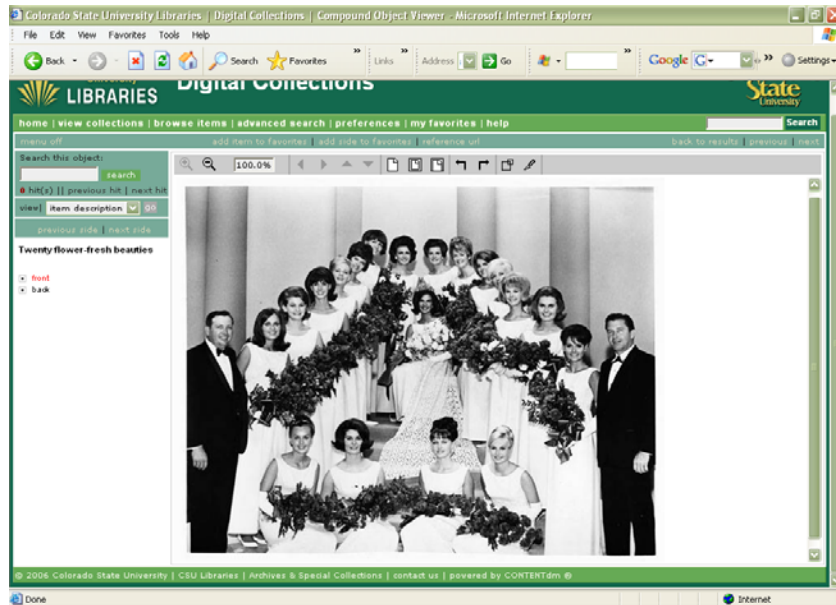
Courtesy of the Records of the Colorado Flower Growers Association, Colorado State University Libraries.

The Standard NAL Metadata was selected due to the cooperative nature of the project and to

allow use of the CDP Best Practices to meet the needs of the local environment. For example, project team members assigned subject terms from the NAL Thesaurus as well as the Library of Congress Subject Headings (LCSH) for subject access to this collection. NAL subject is a required field in the NAL metadata standard, and the CSUL are obligated to use LCSH for subject access in the local digital collections. Assigning subject terms from both thesauri ensured consistency of subject access in both the local and the larger cooperative environments. Because of the archival nature of the collection, the team implemented the fields of original format, original dimensions, part of collection, and collection finding aid, interpreted from both the NAL element of source and the CDP elements of source and relation. These metadata elements served to facilitate user access to the physical pieces preserved in the University Archives and Special Collections.

The project team devised a metadata template and created a metadata data dictionary specific to this project in order to guide the application and data entry of each metadata element. Metadata was entered in Microsoft Excel spreadsheets by single image (i.e. a one-sided and one-page digital object, such as a photograph with no information on the back) and compound object (i.e. a digital object with more than one side or page, such as a postcard, multi-page document or monograph) (see Figure 3).

FIGURE 3. Detailed Display of a Compound Object (Postcard)



Courtesy of the Records of the Colorado Flower Growers Association, Colorado State University Libraries.

[ The spreadsheets were saved in tab-delimited text files as required by CONTENTdm for importing, which were later uploaded with images in order to display the images and metadata through the CONTENTdm interface. Permissions were requested to display copyrighted newspaper photos and magazine covers; only the metadata is displayed in cases where those permissions were not granted. Staff feedback on metadata and user access was solicited at different stages of the project, finally resulting in the metadata visible on the public Web site launched in March 2007 (see Figure 4).

FIGURE 4. Carnations and the Floriculture Industry Web Site Home Page



Courtesy of the Records of the Colorado Flower Growers Association, Colorado State University Libraries.

## CHALLENGES

One of the challenges involved with this project was the need to capture and record technical and preservation metadata for long-term digital migration and preservation. Team members were aware of a draft NISO Z39.87-2002 *Data Dictionary—Technical Metadata for Digital Still Images* (available online) and PREMIS.<sup>19-20</sup> At the time, examples of applications of the standards were rare and the CONTENTdm software does not provide the capability to automatically extract technical metadata. For the project's internal image management and quality control, a data entry sheet was developed in Microsoft Excel for use by the scanning technician to enter basic master TIFF file information such as file size, image width, image length, resolution, color mode used, date created, and date modified. For public access to the digitization process and image creation, a Web page<sup>21</sup> was created which provides a summary of technical information. The Web page URL is included in image-level metadata. In the future, team members would like to use an automated procedure for this task and recommend that the CONTENTdm system add a built-in feature for this purpose.

The decision of when to use JPEG2000 as an access image presented another challenge. CONTENTdm 4.0 has a JPEG2000 extension which enables collection builders to convert full resolution TIFF and JPEG files to JPEG2000 files during the import process. As described on the CONTENTdm site, JPEG2000 is the latest in a series of standards from the JPEG Committee.<sup>22-</sup><sup>23</sup> JPEG2000 provides high quality images at low bit rates, which allows users to view very detailed images without the delays normally experienced while waiting for large images to be transmitted. JPEG2000 is ideal for image archives, maps, drawings, medical images, and other large image formats requiring high compression efficiency and image quality.

The Carnations and the Floriculture Industry digital collection offers a fair amount of graphic and textual materials which are best viewed in JPEG2000 (see Figure 5). At first, the project team created access images only in JPEG. Later, the JPEG images were replaced with CONTENTdm-generated JPEG2000 for the full-text materials in the collection, in order to deliver more readable access images of better quality over the Web. If time and resources permit, team members would also like to provide JPEG2000 access images for the graphic materials featuring both image and text. It would have been helpful to have obtained a better understanding of JPEG2000 or to have developed a local policy on when to use JPEG2000 before this project commenced.

FIGURE 5. Thumbnail Image Display



Courtesy of the Records of the Colorado Flower Growers Association, Colorado State University Libraries.

### ***WEB SITE DEVELOPMENT AND PROMOTION***

A Web site was developed four months prior to project completion to facilitate user access to the digital collection. The purpose of the Web site is to provide users with search and browse functionalities to locate image and full text of interest, as well as information on the collection and the project. The Web designer created a clean yet attractive interface and developed text that was well-organized, concise, and easy to understand. After experimenting with different colors, it was decided to use a light green as the primary site color. The green relates to the collection's content and is also similar to the university's official color of green. For contrast, dark red was chosen for the home page title and hyper-text links. Images were selected from the collection to create alternate backgrounds in the left navigation menu and increase the artistic appeal of the Web pages. Each time any page of the site is refreshed, a random image from the collection is displayed to generate user interest and to advertise the collection.

Several members of the team contributed to the site content. In addition to information on the

collection, the project, technical details, and credits, a timeline related to Colorado carnations and a bibliography of related print resources available at the Libraries were created. The design of the site conformed to the AgNIC Web site development guidelines. Suggestions from the agriculture subject librarian, such as adding item counts on the “Browse by Original Format” page and adding links to search more on the topic in other research tools on the “Search the Collection” page, were also implemented. After the site was launched, the information technology Web specialist on our project team conducted a heuristic evaluation using the U.S. Department of Health and Human Services’ *Research-Based Web Design and Usability Guidelines*<sup>24</sup> (available online) as an instrument and discovered usability problems with the site as outlined in Appendix 2. These findings will be used to inform future Web site designs at CSUL.

The cooperative nature of the project allowed for the promotion of the Web site through numerous channels. Linkage to the site was provided from the Libraries’ Digital Collections home page and the Archives and Special Collections’ Digital Collections Web page.<sup>25-26</sup> A proposal was submitted to AgNIC to include the site on its web portal.<sup>27</sup> The Assistant Director for Development and Communication in the Libraries assisted in promoting the site on the Libraries’ home page and in the *Rocky Mountain Collegian* (the CSU student publication), *AG Family Newsletter* (the publication of the CSU College of Agricultural Sciences), RAMweb (the CSU student Web portal), and the Web pages of the CSU College of Agricultural Sciences, CSU Cooperative Extension, and Colorado Nursery and Growers Association (CNGA).

### ***CONCLUSION***

The creation of the Carnations and the Floriculture Industry digital collection Web site has impacted the CSU Libraries in numerous positive ways. This online digital collection has



promoted awareness of a significant chapter in Colorado history, documented and represented the activities and accomplishments of the Colorado Flower Growers Association, promoted the CSU Libraries as the premier research site for carnation and other greenhouse cultivation and marketing, and provided Internet researchers with immediate access to the distinctive archival materials. The collection and online finding aid have demonstrated the range of archival materials available at the Libraries and resulted in increased interest in the archival collection. In addition, the collection is an exciting addition to the wide range of digital collections offered by the Libraries and has provided the Libraries another opportunity to raise its profile on campus as a provider of digital services. Positive comments regarding the site from members of the campus community include an invitation to collaborate on another grant-funded project to digitize the entire collection of CFGA research bulletins preserved in the University Archives. The bulletins contain articles and data demonstrating decades of collaborative research from CSU and the CFGA, and will greatly expand the scope and research value of the current site.

This project has also served to expand the skills of the Libraries' staff and to illustrate the value of communication in the successful execution of a project. An effective working relationship has been established between different units of the Libraries, valuable experience gained in working with the funding agency, and important knowledge obtained concerning the efficient use of available resources to complete a project within a given timeline. The Web site has seen a steady increase in visits since its launch in March 2007, and more data concerning the site usage will become available during the coming year. Future goals beyond the execution of the cooperative agreement include examining the usability of the metadata provided, enhancing Google's retrieval of the collection's images and full text, and incorporating Web 2.0 technologies such as providing a user tagging feature in the digital object view and promoting

selected image content through Flickr.<sup>28</sup>

## *APPENDIX 1*

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## *APPENDIX 2*

### **Background:**

Greg Vogl, Information Technology Web Specialist at the Colorado State University Libraries, participated in the Information Design (JT661) course offered by Dr. Don Zimmerman at Colorado State University in the spring of 2007. In this class, The U.S. Department of Health and Human Services' *Research-Based Web Design and Usability Guidelines* (<http://www.usability.gov/pdfs/guidelines.html>) were used to conduct a heuristic evaluation of the CSU Libraries Digital Collections web site (<http://digital.library.colostate.edu/>).

The guidelines consist of 209 guidelines, "each graded on its relative importance and the strength of the empirical evidence supporting it. . . . JT 661 class members assessed the usability of the Digital Collections web site against the guidelines and compiled a list of areas of potential improvement based on that assessment." (Authors' note: Wording within quotation marks was cited from the JT661 class report). Vogl used the same instrument and method in his voluntary study of individual digital collection web sites available from the above-mentioned URL. The following relevant sections from his report were used in constructing this appendix:

### *CSU Libraries Digital Collections*

### *Heuristic Evaluation of Usability Problems*

**Greg Vogl 2007-03-20**

Key: Numbers in parentheses are chapters and guidelines in *Research-Based Web Design and Usability Guidelines* (Health and Human Services Department, 2006, <http://www.usability.gov/pdfs/guidelines.html>).

## Carnations and the Floriculture Industry

Primary (left) navigation is only visible if the browser uses styles. (3:11)

The collection title font is hard to read. (11:7)

The repeated background pattern is distracting and unneeded. (14:1, 14:9)

The left navigation background images make the navigation links harder to read. (14:1)

Images in the right column are large, download slowly on dial-up connections, and are not clear because the browser resizes them; use thumbnails instead. (14:3)

### NOTES

1. J. Harrison Dick, ed., *Commercial Carnation Culture: A Practical Guide to Modern Methods of Growing the American Carnation for Market Purposes* (New York: A.T. DeLaMare Printing and Publishing Co., Ltd., 1915), 17, 23–24.

2. W. D. Holley and Ralph Baker, *Carnation Production, Including the History, Breeding, Culture and Marketing of Carnations* (Dubuque, IA: Wm. C. Brown Co. Inc., 1963), 3.

3. Dick Kingman, *A History—Colorado Flower Growers and It's [sic] People* (Thornton, CO: C & M Press, 1986), 14–15.

4. *First Annual Report of the History and Doings of the American Carnation Society for 1891-92* (Kennett Square, PA: Advance Steam-Power, Book and Job Print), 4.

5. Kingman, 11–12.

6. Ibid., 13, 27.

7. Ibid., 17, 19.

8. Ibid., 21, 24.

9. Steve Jackson, “Growing, Growing, Gone: When the U.S. declared war on drugs, Colorado’s carnation industry went up in smoke,” in the *Denver Westword News*, <http://www.westword.com/1996-05-16/news/growing-growing-gone/full> (accessed August 15,

2007).

10. Ibid.

11. Linda M. Meyer, "Guide to the Records of Colorado Flower Growers Association," (2005). Available at <http://lib.colostate.edu/archives/findingaids/agriculture/acfg.html> (accessed August 15, 2007).

12. See the Agriculture Network Information Center (AgNIC) Frequently Asked Questions Web page available at: <http://www.agnic.org/about/facts/faq> (accessed August 15, 2007).

13. Meyer, "Guide to the Records".

14. See the Colorado State University Libraries Digital Collections Web page at: <http://digital.library.colostate.edu/> (accessed August 15, 2007).

15. Access the *Western States Digital Imaging Best Practices Version 1.0* document online at: [http://www.cdpheritage.org/digital/scanning/documents/WSDIBP\\_v1.pdf](http://www.cdpheritage.org/digital/scanning/documents/WSDIBP_v1.pdf) (accessed August 15, 2007).

16. See the CONTENTdm by DiMeMa, Inc. home page at: <http://www.dimema.com/> (accessed August 15, 2007).

17. Access the *CDP Dublin Core Metadata Best Practices Version 2.1.1* document online at: <http://www.cdpheritage.org/cdp/documents/CDPDCMBP.pdf> (accessed August 15, 2007).

18. See the *Carnations and the Floriculture Industry* Web site at: <http://lib.colostate.edu/archives/agriculture/carnations/> (accessed August 15, 2007).

19. Access the NISO draft standard at: [http://www.niso.org/standards/resources/Z39\\_87\\_trial\\_use.pdf](http://www.niso.org/standards/resources/Z39_87_trial_use.pdf) (accessed August 15, 2007).

20. See the PREMIS Working Group Web site at: <http://www.oclc.org/research/projects/pmwg/> (accessed August 15, 2007).

21. See the Technical Information Web page of the Carnations Web site at:  
<http://lib.colostate.edu/archives/agriculture/carnations/technical.html> (accessed August 15, 2007).
22. See the CONTENTdm JPEG2000 Extension Web page at:  
<http://www.dimema.com/products/jpeg2000.html> (accessed August 15, 2007).
23. See the JPEG committee home page at: <http://www.jpeg.org/> (accessed August 15, 2007).
24. Access the Guidelines online at: <http://www.usability.gov/pdfs/guidelines.html> (accessed August 15, 2007).
25. CSU Libraries Digital Collections at: <http://digital.library.colostate.edu/> (accessed August 15, 2007).
26. See the CSU Archives and Special Collections Digital Collections Web page at:  
<http://lib.colostate.edu/archives/digital.html> (accessed August 15, 2007).
27. See the Agriculture Network Information Center (AgNIC) home page at:  
<https://www.agnic.org/> (accessed August 15, 2007).
28. Flickr is a popular photo sharing Web site that allows Internet users to organize and share their photos: see <http://www.flickr.com/> (accessed August 15, 2007).