

Wanted Alive:

Redesigning a Local Museum's Website for Usability and Accessibility

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Redesigning a Local Museum's Website for Usability and Accessibility

We are designing a website for a local history museum located in Clovis California. This project was prompted by an in-class reflection on unmet information needs in our lives, and the project was motivated by a desire to facilitate access to the museum by providing order to the website's cluttered content. Currently, the Clovis-Big Dry Creek Museum website (<https://www.clovis-museum.com/>) is both outdated and inaccessible.

Our goal is to provide the Clovis Museum with an accessible and aesthetically pleasing website that staff would be able to update and expand from a user-friendly content management system. Based on the city's general demographics, observations in the museum, and the evocative language of the website, we have conjectured that the majority of visitors to the website are older (i.e., aged 65 years and over). Thus, we designed our website prototype with older users' information needs and accessibility requirements in mind, with the understanding that other users with no accessibility requirements would also benefit from the redesign.

Background

The Clovis Museum is a non-profit organization operated by the Clovis-Big Dry Creek Historical Society. Information about the museum's management is quite limited, but from what there is, we surmise that the museum curator and docents (pictured below) are members of the Society and its Board of Directors.



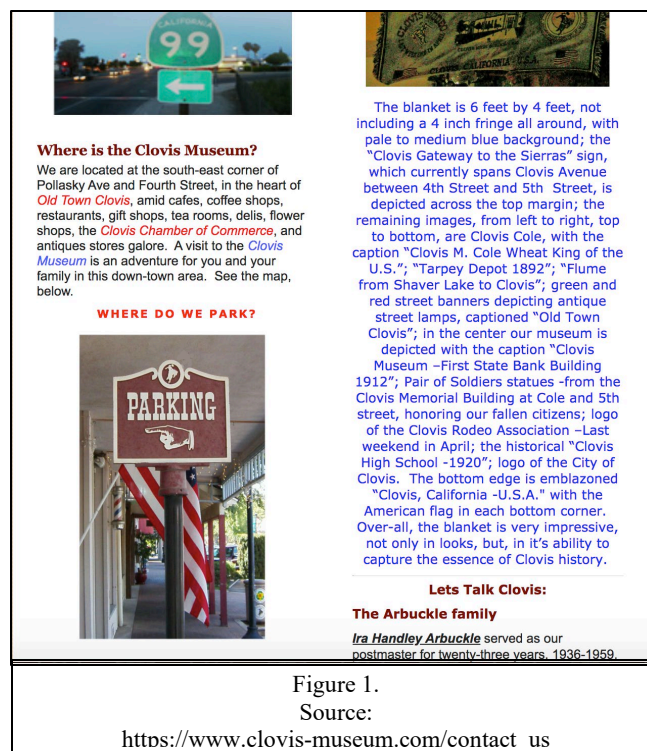
All docents are volunteers; thus, the museum staff likely lacks the time to make the radical changes to the website that the site needs to become accessible. That being said, we did see that the website was last updated on November 12, 2019; however, any updates that were made were so insignificant that they confirmed our belief that staff may benefit from an external vision for the website. In addition, the museum is small and it collects no admission fees, so it is likely that staff would require a fairly cheap and user-friendly content management system from which to update and expand the website.

As previously stated, we conjecture that the museum's user group is primarily 65 years and older. Judging from the city's demographics, the website's conservative leanings and the website's heavily nuanced, outdated language about marginalized communities such as African-Americans and indigenous peoples), we also conjecture that these older users may be white and conservative. The other possibility is that museum staff believe that they are addressing this audience, when the reality may be far more diverse.

At this point, addressing factors that led us to conclude that the staff and/or users at the Clovis Museum were older, white, and conservative would take us beyond the scope of our project, as it would require an extensive educational program on the importance of critical historical consciousness in memory institutions, as well as a line by line revision of the website's content. However, we feel strongly that the slurs on the website (e.g. "blacks") and lack of context around images of indigenous artifacts (e.g. a photo captioned "Above: Grinding Mortar with Pestle") are intensely problematic. In an effort to avoid replicating a settler-colonial perspective on the new website, we have removed the slurs and any indigenous content without context from our prototype.

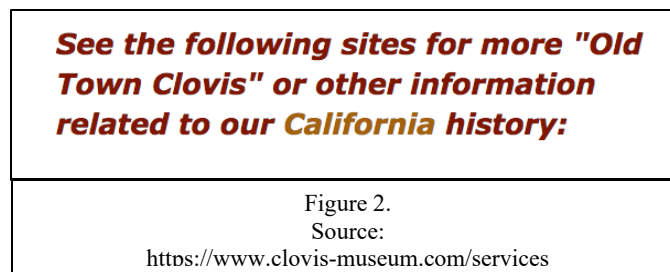
We surmise that the main reason our user group would access this information resource is to plan their visit, and to see whether they would be able to learn more about local history on the website.

With these priorities in mind, we attempted to find this information on the website to see how efficiently users might be able to meet these information needs. The results were dismal. Currently, the museum's hours and contact information are scattered inconsistently in the website, as is its content about local history. For instance, the museum's email contact form is hidden at the bottom of the "Contact Us" page under several seemingly random pieces of information about local families and various grainy photographs of signs and directions to the Clovis Museum (see Figure 1, below).



The website requires a huge amount of scrolling to access all the information on the page, and text is inconsistently formatted in a variety of fonts, sizes, colours, and line spacing types.

Additionally, the vast majority of links did not work, unexpectedly linked back to the top of the page, or led to websites that had no relationship to the link in question. For instance, a link called “California” (see Figure 2, below) led to a Yahoo! log-in page. These issues led us to feel a sense of information overload, and contributed to our impression that the website was sloppy and unprofessional. This does not reflect positively on the museum, and it likely will not encourage users to visit or support the institution.



Examining the website in depth confirmed our belief that its design should be revised so that all users—not just those with accessibility needs—can find the information they want immediately, by placing this information in an intuitive place on the page, and by presenting the information in an organized manner.

Beyond presenting information in an unintuitive manner and digitally perpetuating a settler-colonial perspective, the website has many issues with formatting that might in isolation be considered minor design flaws but together make for an unattractive and overwhelming website that is hostile to visitors with and without online accessibility requirements. Our prototype of a new and improved Clovis Museum website, attached, will address these issues to provide online visitors with a more pleasant user experience that will promote engagement with the website, the museum, and with local history and the Clovis community in general.

The Website Design Process

We redesigned the Clovis Museum website so that all visitors to it, including older adults 65 and over, would be able to access information on it easily and be satisfied using it. We made general design decisions, keeping in mind the reasons people would visit the website:

- to get information to plan a visit to the museum.
- to see if the museum is a place they may want to visit.
- to learn about local history.
- to find out if the museum & historical society has resources to help with their research on local history.

The homepage contents, along with the clear navigation choices, help the visitor know quickly that the website is a) for a local history museum b) that the museum has things going on, and c) local historical information can be searched and browsed. We reached this goal specifically through our design choice of prominently placing historical images, using boxes for different content, clear titles, and few well-delineated navigation choices. (see figure 3).

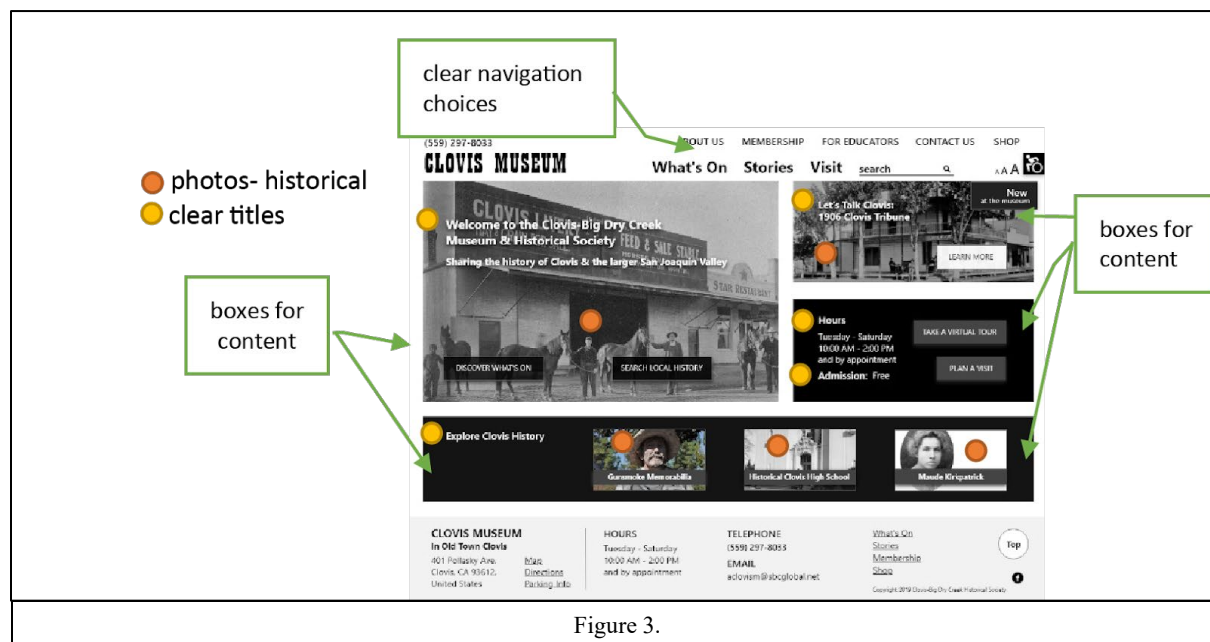


Figure 3.

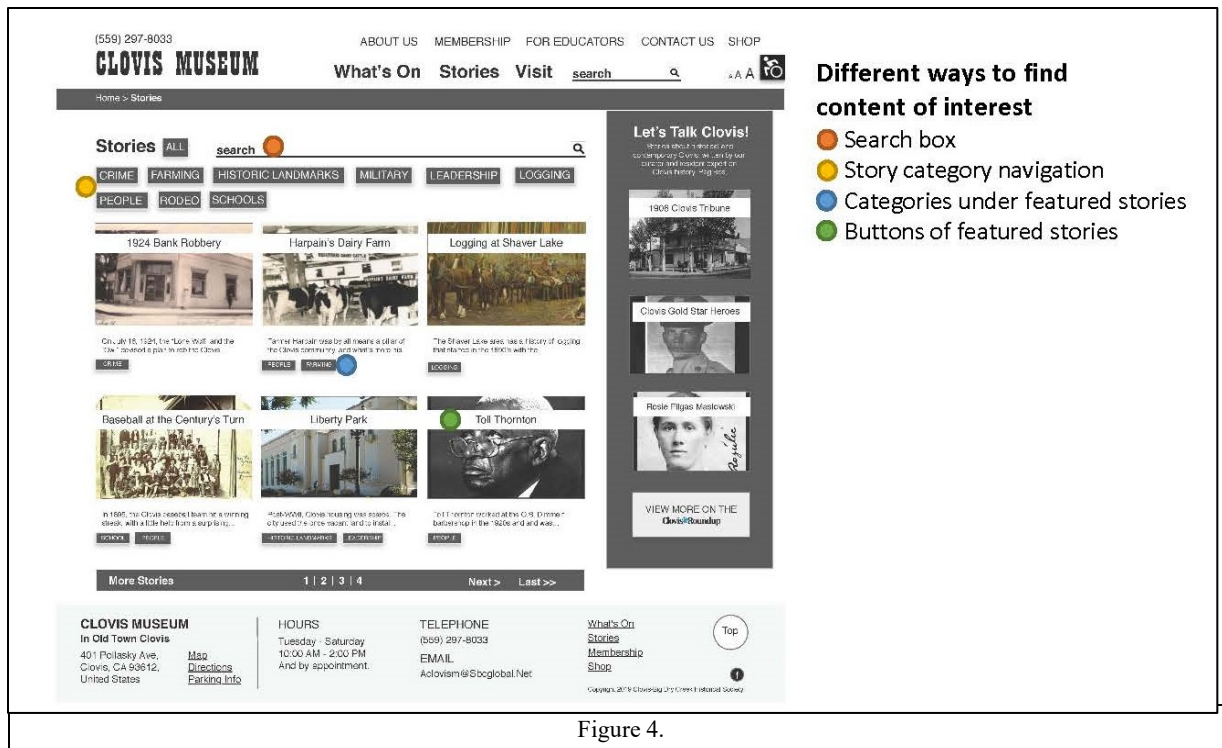
The difficulties and frustrations older people have when using websites impacted our re-design, and we tried to design our site to be both satisfying and user-friendly for this user group.

Designing websites to be user-friendly for older people is similar to designing for people with disabilities (Henry, Abou-Zahra, & Arch, 2009; W3C, 2018)]. This is because many older people have impairments due to ageing that can affect how they use websites. These impairments, as outlined by Kane (2018), Sayago & Blat (2011, p. 360), and W3C (2018), include declining a) vision — reduced colour perception, sensitivity to contrast, and near focus, making it difficult to read online content; b) physical ability — including reduced dexterity, making using a mouse and clicking on small targets challenging, and c) cognitive ability — including “reduced short-term memory, difficulty concentrating, and being easily distracted, making it difficult to follow navigation and complete online tasks” (W3C, 2018).

With these impairments in mind, we analyzed the old site and designed our prototypes while considering the Web Content Accessibility Guidelines (WCAG) 2: (W3C, 2019). Specific recommendations we addressed in our prototype include:

- Adaptability: We added an accessibility plugin so that the web pages' content can be presented in different ways: options are available for hiding images, highlighting links, changing the background colour and font colours.
- Contrast: We have a very high contrast ratio between text and background colour throughout the whole website.
- Resize text: We have prominently placed text resize buttons.
- Titles: Our web pages have titles that describe topics or purposes clearly – they don't use jargon or misleading words
- Links have purpose and are in context: The purpose of each link can be figured out from only the link text or the link text plus its context. Examples on the home page include “Discover What's On,” “Search Local History,” “Plan a Visit.”
- Clear links: Buttons or underlined text clearly indicate the links.
- Finding options: We give a lot of different ways for older users to get to pages that interest them. For example, on the Stories page, stories can be searched in the search box, found through clicking on story categories near the top of the page, clicking on categories under the featured stories, or clicking on specific featured stories. (See figure 4).

- Clear location: Information about the user's location in the website is displayed because we include breadcrumb navigation on interior web pages (Home > Stories).



We also took steps to design a site that would not be frustrating for seniors to use. In their study on website evaluation for older adults and of 'senior-friendly' guidelines, Hart, Chaparro, & Halcomb (2008, p. 197) found that older people's top complains about poorly designed website were:

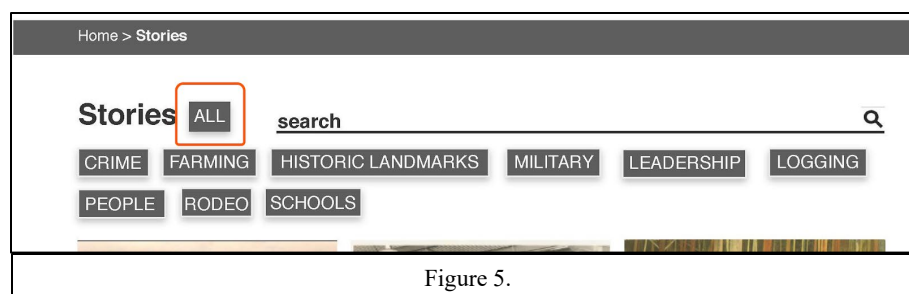
- 'unclear button labels'
- 'confusing names for categories'
- 'too much info to look through'
- 'info. overload and cluttered'
- 'hard to get back to homepage'
- 'font too small to read through'
- 'too much scrolling'

With these complaints in mind, we simplified and organized the content from the existing site so older users would be less overwhelmed and feel more satisfied using our redesigned website.

Our homepage does not include too much text or too many sections – just four sections – and important information is prominent – hours, phone number, search box, and so on. We also used images to convey what type of website it is without overloading older users with too much content. As well, when using a desktop, laptop or tablet, the Homepage requires no scrolling, and the Stories page requires only a minimal amount to view all the content.

Another way we simplified and organized the existing website contents was by creating the category Stories. By creating this category, we were able to fit the disjointed pieces of historical information and images from the existing website into one place and to sort the contents into meaningful categories. The category names we chose also provide an overview of what sort of history Clovis has had, improving how the website represents the museum and hopefully striking curiosity in visitors to the website.

We also included the option for stories to be browsed and searched for, so that senior users do not have to expend energy trying to figure out the one way to search or browse. See Figure 4. As well, we did not include too many stories on the main Stories page, so that older users would not get overloaded with information and would not have to scroll through a long page. For users who want to browse more through “All” stories, we give this option (see Figure 5).



Regarding cognitive impairments and designing for older users, Wagner, Hassanein, & Milena (2014, p. 271-272) point out that older adults suffer from declines in spatial ability,

which influences how well they use websites because of increased difficulty in forming accurate mental models. This means older users often get feelings of lostness when navigating web page, as also outlined in Chevalier, Dommes, & Martins (2013, pp. 1011-1012). To help older users accordingly, we kept our site's navigation simple and shallow – we have just three primary navigation choices (What's On, Visit) and just five utility navigation choices (About Us, Membership, For Educators, Contact Us, Shop). Also, our navigation does not go deeper than two steps away from the homepage, for example, Home > Stories > Crime. Most content can be found from just one click away from the homepage, helping to prevent older users from feeling lost.

Last, we also improved on the old website by following essential web usability tips, as outlined by Krug (2015), Nielsen (2006), and Wilson (2018). We took advantage of conventions, for example, putting the search box at the top right and the phone number at the top, including the address and contact information in the footer, placing the site name linked to the homepage in the top left. We also broke pages up into clearly defined areas, for example, putting the Let's Talk Clovis newspaper features in a separate, differently coloured box to the right of the main Stories contents. To eliminate distractions, we left out unnecessary content, including post dates, lengthy introductions to the museum, and meaningless graphics. As well, we formatted content to support scanning by, for example, using clear heading hierarchies, editing down text, and not using long words. Finally, on the interior page, Stories, we provided links in the content area—not just in the top navigation—to get to content elsewhere in the site.


Conclusion

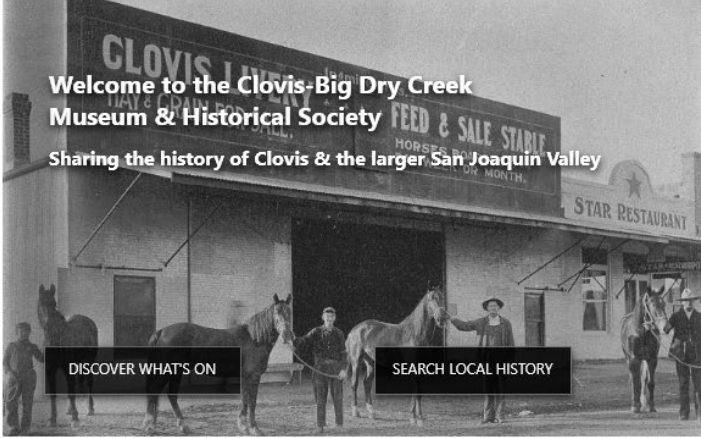
Although we designed our website prototype carefully considering older users' information needs and accessibility requirements and by applying web usability and accessibility standards, we must follow up with usability testing. Hart, Chaparro, & Halcomb (2008, p 197) emphasize that "an iterative process incorporating both heuristic evaluation and usability testing has been found to be the best practise for designers (Jeffries *et al.* 1991, Nielsen 1994); as Nielsen (n.d.) suggests 'each finds usability problems overlooked by the other method'." With this in mind, our next step will be to do usability testing with a small number of seniors to determine flaws in our design. Finally, we will make changes based on the test findings to ensure our final website is functional and satisfying to use for older adults.

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CLOVIS MUSEUM


What's On Stories Visit [A A A](#) 



Welcome to the Clovis-Big Dry Creek Museum & Historical Society

Sharing the history of Clovis & the larger San Joaquin Valley

DISCOVER WHAT'S ON SEARCH LOCAL HISTORY



Let's Talk Clovis:
1906 Clovis Tribune

LEARN MORE

New at the museum

Hours


Tuesday - Saturday
10:00 AM - 2:00 PM
and by appointment

Admission: Free


TAKE A VIRTUAL TOUR

PLAN A VISIT


Explore Clovis History



Gunsmoke Memorabilia



Historical Clovis High School



Maude Kirkpatrick

CLOVIS MUSEUM
In Old Town Clovis

401 Pollasky Ave,
Clovis, CA 93612,
United States

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[Parking Info](#)

HOURS


Tuesday - Saturday
10:00 AM - 2:00 PM
and by appointment

TELEPHONE
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EMAIL
aclovism@sbcglobal.net

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Our redesigned home page.

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1924 Bank Robbery

On July 16, 1924, the "Lone Wolf" and the "Owl" devised a plan to rob the Clovis...

[CRIME](#)

Harpain's Dairy Farm

Farmer Harpain was by all means a pillar of the Clovis community, and what's more his...

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Logging at Shaver Lake

The Shaver Lake area has a history of logging that started in the 1890's with the...

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Baseball at the Century's Turn

In 1895, the Clovis baseball team hit a winning streak, with a little help from a surprising...

[SCHOOL](#) [PEOPLE](#)

Liberty Park

Post-WWII, Clovis housing was scarce. The city used the once vacant land to install...

[HISTORIC LANDMARKS](#) [LEADERSHIP](#)

Toll Thornton

Toll Thornton worked at the O.S. Dimmen barbershop in the 1920s and and was...

[PEOPLE](#)

Let's Talk Clovis!

Stories about historical and contemporary Clovis, written by our curator and resident expert on Clovis history, Peg Bos.

1906 Clovis Tribune

Clovis Gold Star Heroes

Rosie Filgas Maslowski

VIEW MORE ON THE ClovisRoundup

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CLOVIS MUSEUM
In Old Town Clovis

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Clovis, CA 93612,
United States

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HOURS

Tuesday - Saturday
10:00 AM - 2:00 PM
And by appointment.

TELEPHONE

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EMAIL

Aclovism@Sbcglobal.Net

What's On

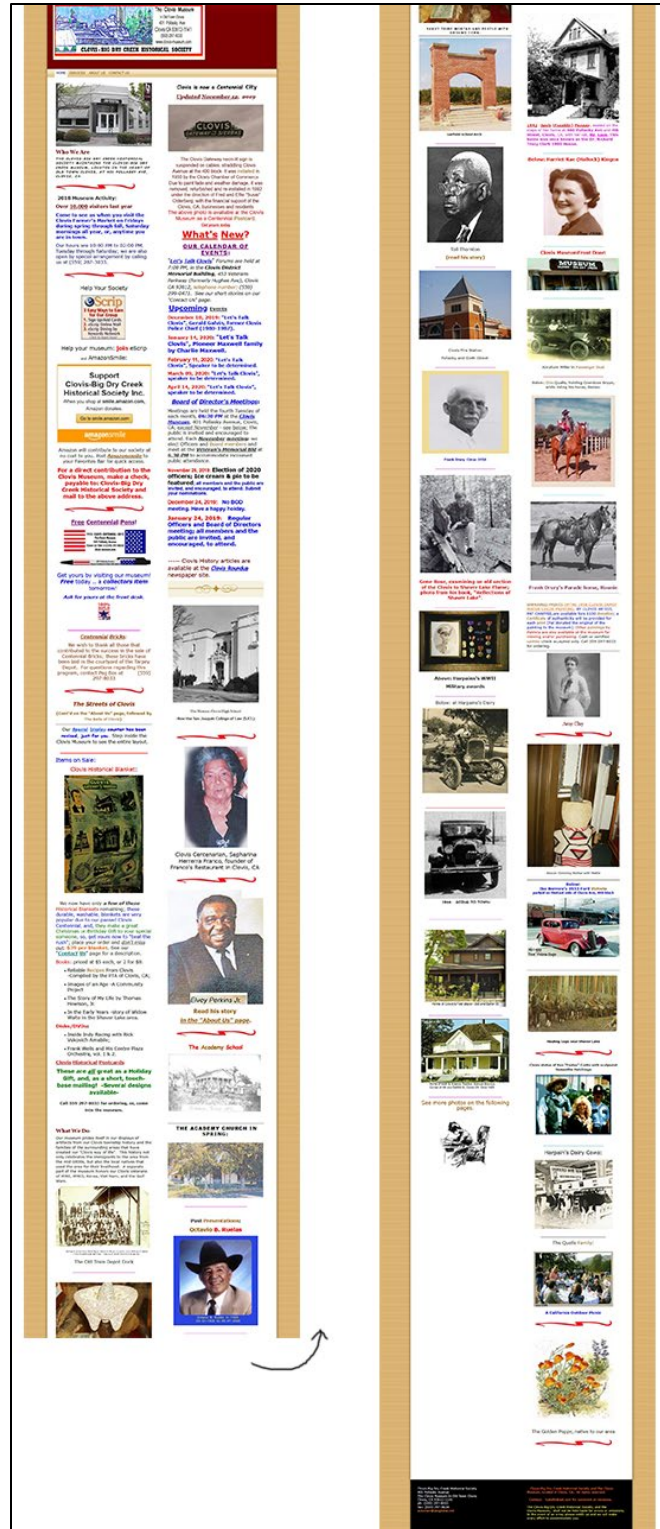
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Our "Stories" page.



The original "Home" page.
Source: <https://www.clovis-museum.com/>

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