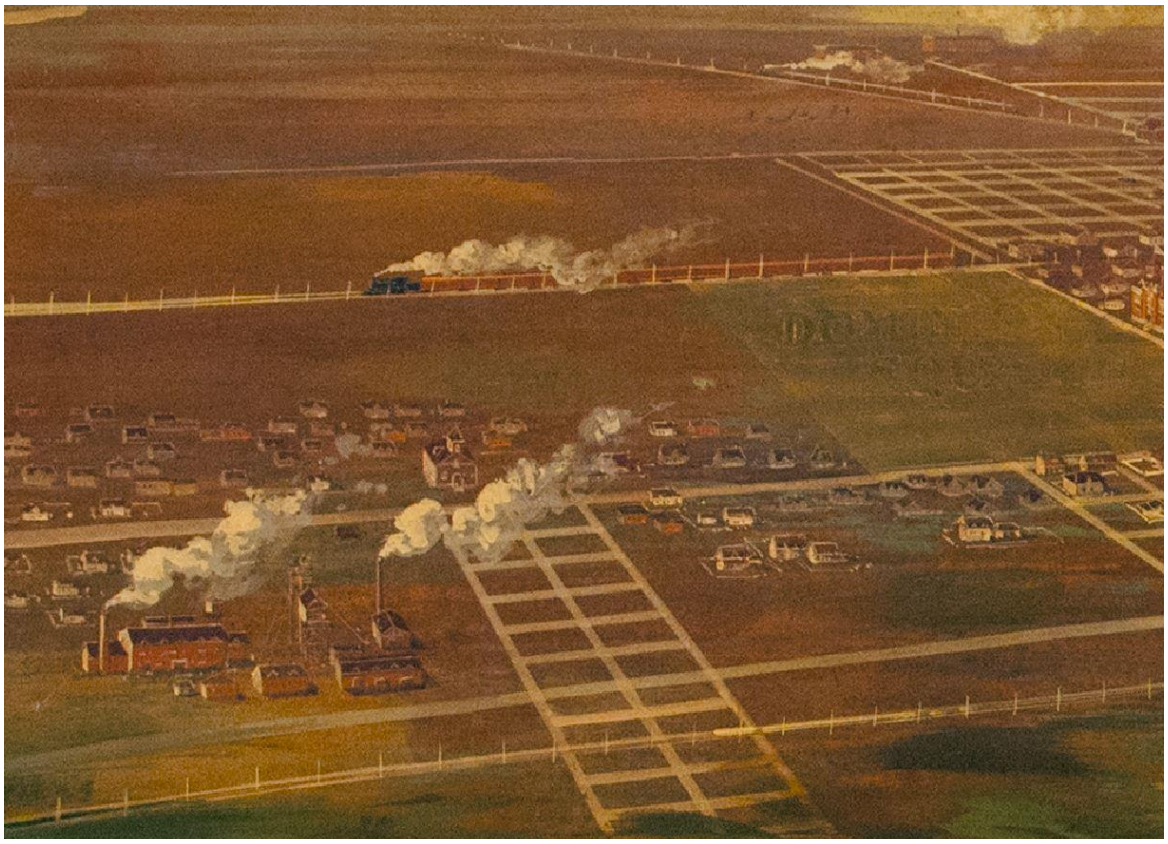
ASSOCIATION OF CANADIAN MAP LIBRARIES AND ARCHIVES

BULLETIN

Bird's-Eye Views of Alberta's Land Boom of the 1910s

Rhys Stevens, University of Lethbridge Library

While researching a large bird's-eye view oil painting displaying the City of Lethbridge, Alberta as it would have appeared in 1912, I came across a brochure that provided clues as to the painting's origins. The brochure contained a reprint of slightly different version of the painting and a label indicating "This is one of the Gibson Catlett Real Estate Landscape Paintings." It soon became clear to me why the painting had been re-touched and why there were grids of unoccupied city blocks shown on the north side of Lethbridge. This painting hadn't been intended strictly as a piece of art but was, in fact, a prop for an advertising campaign designed to sell real estate in a Lethbridge development called Dominion Square owned by Mitford & Co.



City of Lethbridge, 1912 by Gibson Catlett. Close-up of section of painting showing the Dominion Square development. *The words "DOMINION SQUARE" are faint but visible in the upper-right of this image. Courtesy of University of Lethbridge Art Gallery (Object no. 1971.2).*

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The Golden Age of Bird's-Eye Views and Viewmaking

Bird's-eye views of cities in the nineteenth-century were frequently employed as a form of popular art as well as a means of advertising. In *Views and viewmakers of urban America*, urban planning historian John W. Reps (1984), noted that, "Land speculators, townsite promotors, and civic leaders all used urban views to attract people and industry to their communities, often subsidizing the publication of the views to make wider distribution possible"(p. 4). Of the hundreds of printed views of the United States and Canada documented by Reps in his book, virtually all were created using the medium of lithography. Using this process, lithographers transformed an artist's drawing into an attractive printed image with sharp lines and precise, crisp details.

Lithographic viewmaking enjoyed its golden age in the U.S. during the twenty-five year period from 1866 to 1891 but its popularity gradually petered out by the early 1900s. There wasn't a single reason that led to the demise of viewmaking and perhaps it simply went out of style as tastes in popular art changed. A likely contributing factor was that the views published in the early twentieth-century using "improved" methods of printing (e.g., halftone screens) were much less attractive as prints than those produced using the lithographic press.

Bird's-Eye Views and Historical Research

An artistic bird's eye view portrays a city as if seen from an imaginary viewpoint high up in the air and shows how a geographic location would have looked at a particular point in time. The usual process followed by an artist to create one is described by Reps (1984) in this way:

> "The artist, meanwhile, was busy with the arduous task of sketching every building in town. Although he may have used whatever elevated viewpoints existed, in most cases the artist walked the streets and recorded what he saw in his sketchbook. From a town map or, if the place had been platted in the usual checkerboard pattern, from his own simple measurements and observations, the artist constructed a perspective grid showing the town's streets. On this he re-drew the buildings from his sketches, taking care to make each one the correct size. From this rough sketch of the entire town the artist then produced a more finished and attractive drawing" (p. 10).

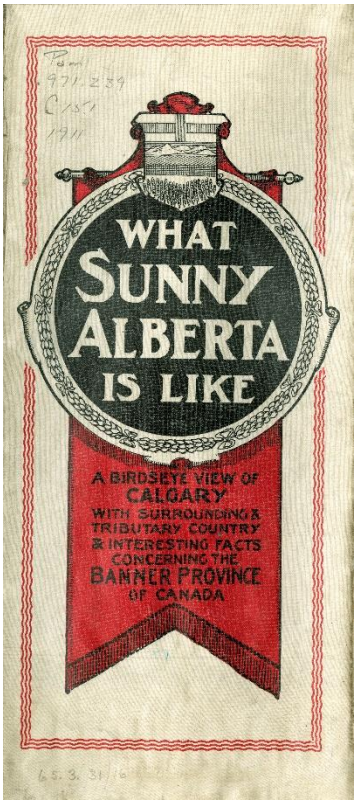
City street patterns, significant buildings, and topographic features and are often readily identifiable in bird's-eye views. In some locales, these maps can be the only available option for obtaining such details. It is for these reasons that scholars have "…rediscovered these views as sources for research in the history of architecture, city planning, transportation, urban geography, printing technology, and other fields" (Reps, 1984, p. 16).

Bird's-Eye Views of Alberta's Towns and Cities

In 1976, the Public Archives of Canada held an exhibition entitled *Bird's-Eye Views of Canadian Cities: An Exhibition of Panoramic Maps (1865-1905).* No views from either Alberta or Saskatchewan appeared in this display of 78 maps from 75 different cites (Fox, 1977).

More recently, in her chapter on bird's-eye view maps, Eva Dodsworth (2018) identified a total of three photolithographic-style views of Alberta as found in the online collections of the Library of Congress, Library and Archives Canada, and various university library holdings. Perhaps due to Alberta's relatively young age,[1] its widely dispersed population and distant location on Canada's western frontier relatively few "classic" lithographic views were produced that pictured Alberta cities and towns.

Since bird's-eye views are easily understandable, they were frequently employed by real estate developers to assist people in the identification of land locations. If used for such promotional purposes, a view would typically include other embellishments hinting at future prosperity (e.g., new subdivisions, bridges, anticipated railways, streetcar lines, and belching smokestacks) to entice prospective buyers. Despite there being few bird's-eye views of Alberta produced as lithographs, there are plenty of examples of views created in the 1910s for use in advertising. Production of these views coincided with the explosive population growth in the Prairie Provinces that took place as settlers flooded into Canada's west. Land developers, real estate promoters and city boosters realized that these new immigrants would spur demand for land in Alberta's towns and cities.



Cover of What sunny Alberta is like: A bird's-eye view of Calgary (1911) by H. M. Burton. *Courtesy of University of Calgary Archives and Special Collections. Image considered to be in the public domain.*

Alberta's Real Estate Advertisers and Artist Entrepreneurs

Fred C. Lowes was Calgary's most successful land promoter of the early 1910s and was known to spare no expense when it came to advertising his properties for sale (Foran, 1989). He and several of his realtor contemporaries employed the services of artists to produce illustrations and bird's-eye view maps to be incorporated into print advertisements. These views most frequently appeared within newspaper ads but were also reproduced on handbills, city promotional booklets and souvenir postcards. Harry Marriott (H. M.) Burton (1882-1979) and Gibson Catlett (1866-1935) were two of the artists who painted[2] many of the bird's-eye views of Alberta done during the land boom. Burton was a trained British artist and illustrator who lived in Calgary from 1910 to about 1912. Gibson Catlett was a self-taught American artist and advertising man who specialized in the production of city views for real estate sales. He arrived in Calgary in 1911 and set up his studio which employed trained artists to assist him in the production of these works (Stevens, 2018).

[1] Alberta became a Canadian province on September 1, 1905. Unofficial estimates for the size of its population at that time range from between 160,000 to 250,000 people.

[2] Gibson Catlett would first sketch city streets and building. Next, his team of artists and colorists would re-create the view and produce a final painted version.

"Men inside a real estate sales office, possibly Calgary, Alberta", 1911. *[PA-4096-2]. Courtesy of Glenbow Archives, Archives and Special Collections, University of Calgary. The partially obscured map behind the man standing is [Bird's-eye view of Calgary] (1910) by H. M. Burton. The map directly above the seated man is What Sunny Alberta is Like (1911), also by H. M. Burton.*

Alberta's Promotional Bird's-Eye Views

The twenty-five views of Alberta's cities and towns that appear in Appendix A. were all created between 1910 and 1915 and represent the best examples of this type of work. A majority of them picture Calgary and region which may have been because the province's two most prolific bird's-eye view artists were based in the city during this time. In addition to views of Calgary, there are others that show Edmonton, Lethbridge, Medicine Hat, Banff, Bassano, and Athabasca as they appeared in the 1910s.

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Appendix A

Twenty-Five Examples of Bird's-Eye Views of Alberta's Land Boom of the 1910s

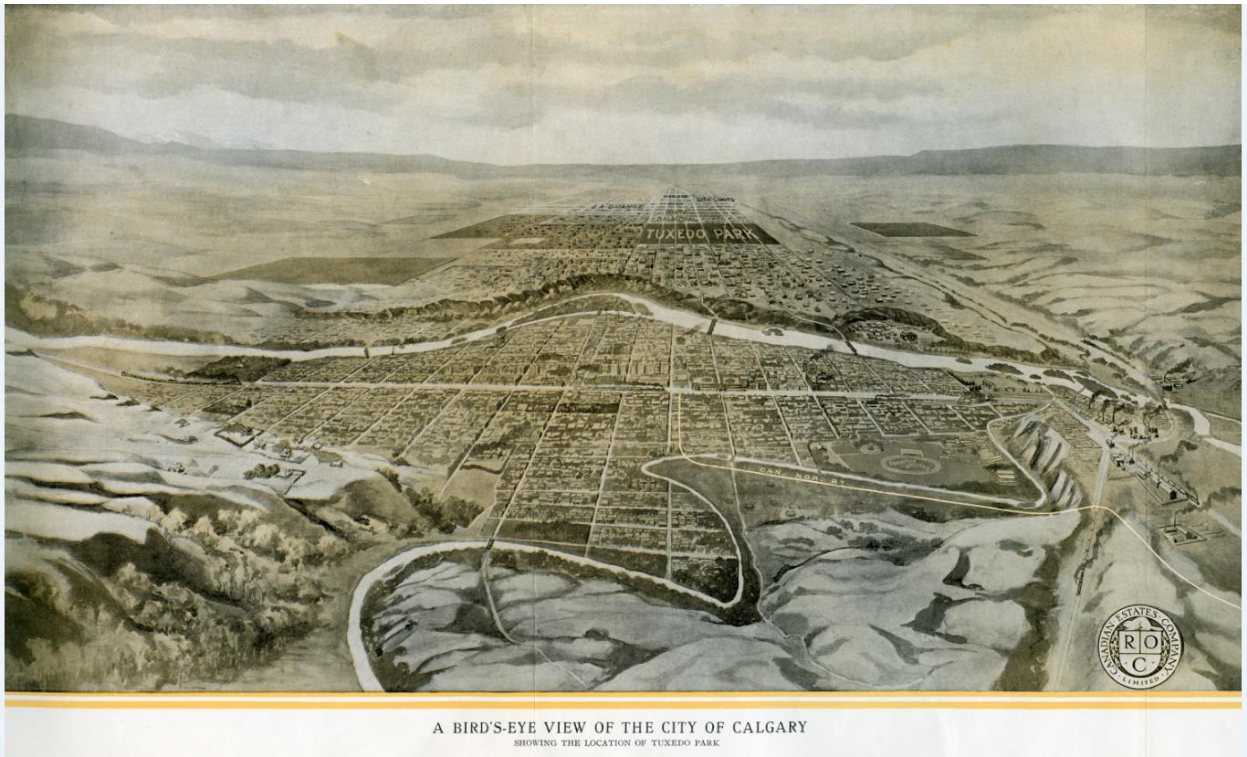
1. Burton, H. M. (1910). ***[Bird's-eye view of Calgary]*** [map]. (scale indeterminable). Calgary: Calgary Engraving Co.

Courtesy of William C. Wonders Map Collection, University of Alberta (ID 29356). Image considered to be in the public domain.

Artist Harry Marriott (H. M.) Burton painted this northward-facing view of Calgary in 1910[1] which accurately details the extent of the city and its topography. The map includes labels for railway and streetcar lines, canals, and trails (roadways) and key industrial areas east of the Bow River. Vast areas of this eastern periphery around Hubalta and the Canadian Pacific Railway (C.P.R.) Industrial Division lands indicate where significant future growth was anticipated. Real estate advertisements for Hubalta subdivisions appearing in the *Calgary Herald* in late 1910 included illustrations by H. M. Burton. These advertisements suggest that Burton's 1910 Calgary view was utilized in promotional real estate campaigns. A reproduction of this map was published by the Association of Canadian Map Libraries and Archives in 2004. The original is held at the William C. Wonders Map Collection, University of Alberta in Edmonton.

[1] It was reported in the *Calgary Herald* (1910, August 16, p. 1) that, "Fifty thousand copies of a birdseye view of the city and surrounding country, as it will appear in years to come, were ordered [by Calgary City Council] from H. M. Burton for $2,000."

2. Canadian Estates Company Limited. (1911). **A bird's eye view of the City of Calgary showing the location of Tuxedo Park** [map]. In J. Ruse and C. A. Owens, *The story of Calgary, 1911 and Tuxedo Park.* Calgary: J.O.E Ltd.

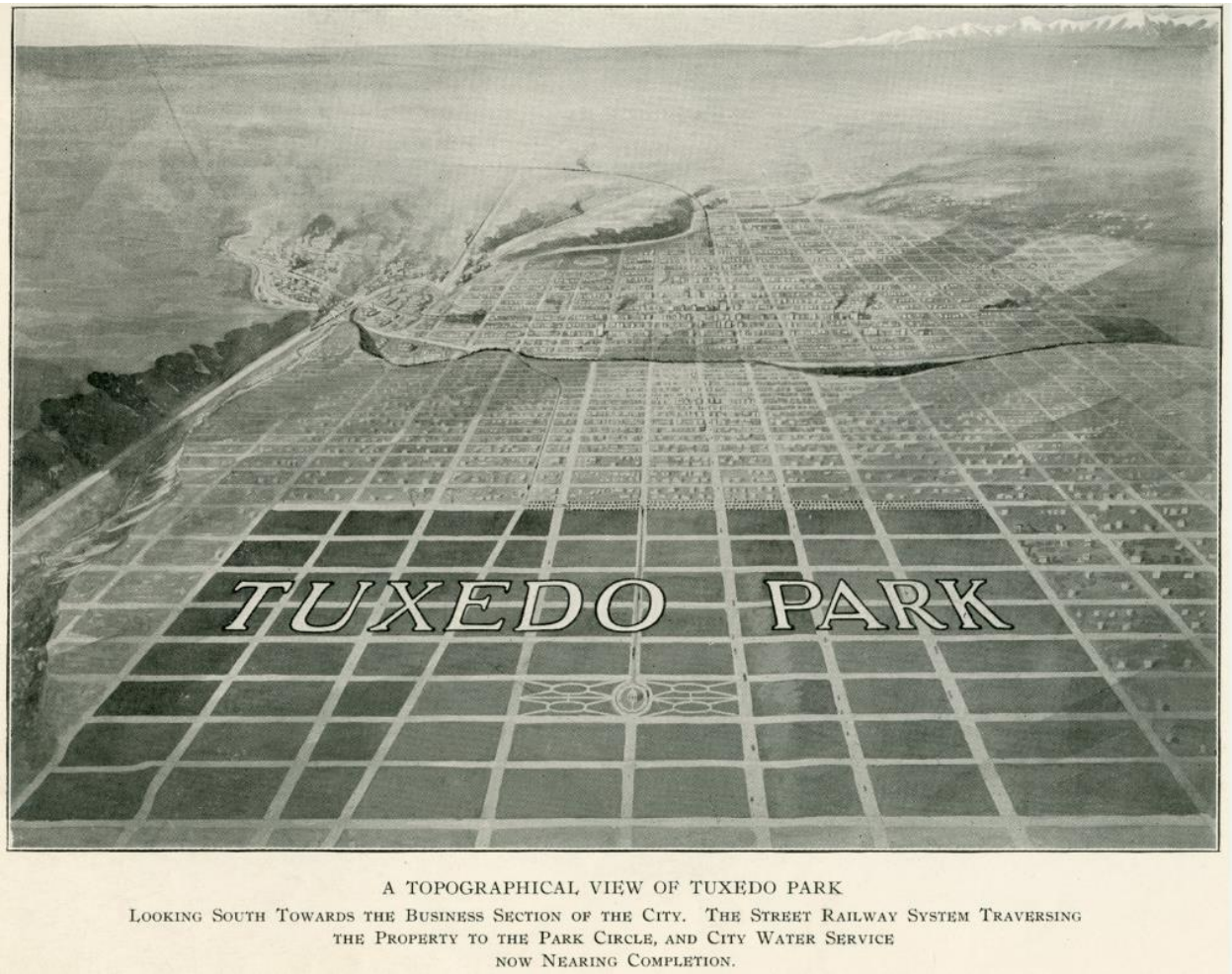


Courtesy of University of Calgary Archives and Special Collections. Image considered to be in the public domain.

This northward view of the City of Calgary was one of several that appeared in a promotional booklet published in 1911 extolling the virtues of Calgary and its new Tuxedo Park subdivision. Tuxedo Park was owned by the Canadian Estates Co. and its location is clearly identified north of the Bow River along with the La Grange, Highland Park and North Balmoral developments. Few other features are identified apart from the Canadian Northern Railway and the Exhibition Grounds. The visible landscape surrounding the city has been enhanced to make the overall view more attractive. The artist is unknown but the style of this view resembles those in advertisements[2] created by H. M. Burton.

[2] This view was also published as part of an advertisement in the Calgary Herald (1911, April 20, pp. 18-19).

3. **A topographical view of Tuxedo Park** [map]. (1911). In J. Ruse and C. A. Owens, *The story of Calgary, 1911 and Tuxedo Park.* Calgary: Land & General Investment Co.



A TOPOGRAPHICAL VIEW OF TUXEDO PARK
LOOKING SOUTH TOWARDS THE BUSINESS SECTION OF THE CITY. THE STREET RAILWAY SYSTEM TRAVERSING THE PROPERTY TO THE PARK CIRCLE, AND CITY WATER SERVICE NOW NEARING COMPLETION.

Courtesy of University of Calgary Archives and Special Collections. Image considered to be in the public domain.

This view looks southward from the Tuxedo Park subdivision to Calgary's downtown business district. It is one of several views that appeared in a promotional booklet published in 1911 extolling the virtues of Calgary and advertising Tuxedo Park which was owned by the Canadian Estates Co. Plans for Tuxedo Park included a pavilion within the centre of "Tuxedo Gardens" which was to be serviced by a new municipal street railway line. The artist is unknown but this view resembles others produced by H. M. Burton.

4. **[Advertisement for "West Bridgeland" by Henderson Land Co.]**. (1911, September 2). *Calgary Herald*, p. 24. https://www.newspapers.com/image/480072223/

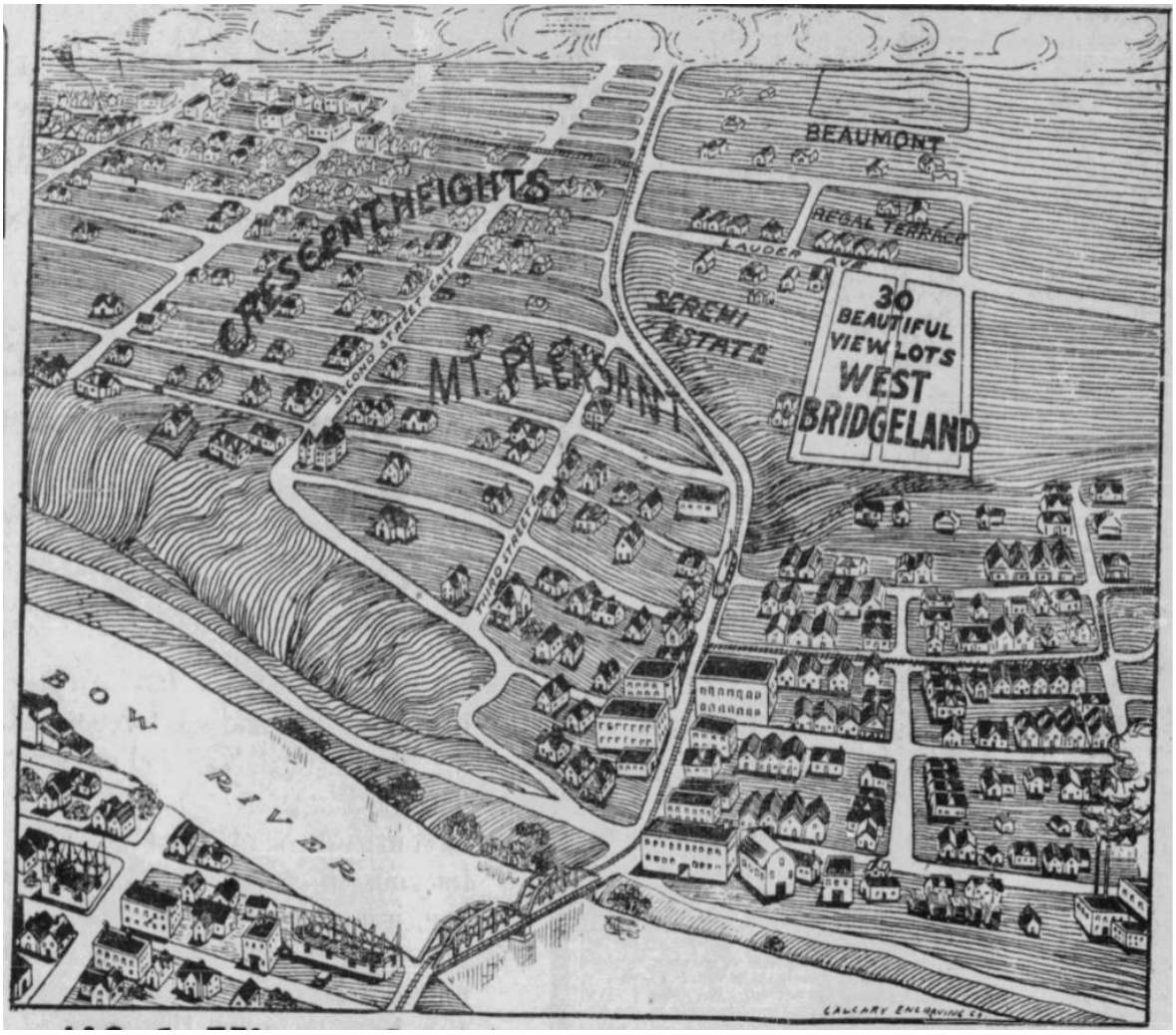
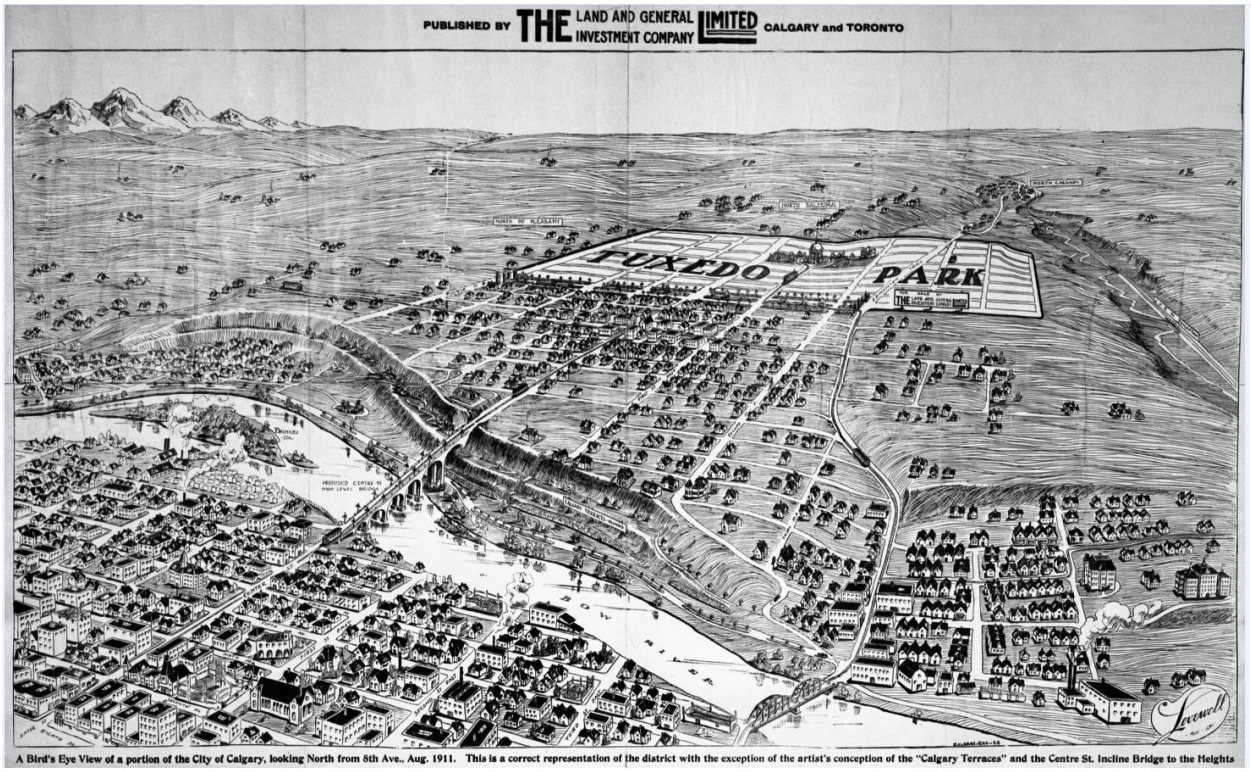


Image from historical newspaper content considered to be in the public domain.

Included in a 1911 *Calgary Herald* newspaper advertisement for the Henderson Land Co.'s "West Bridgeland" development was this view of Calgary looking north from the downtown business district. This work resembles the type of bird's-eye view lithograph that was produced in the 19th century. Street names are visible as are names of the nearby residential subdivisions of Crescent Heights, Mt. Pleasant, Sereni Estate, Beaumont and Regal Terrace. This lithograph was produced by the Calgary Engraving Co. but the artist was not identified.

5a. ***A bird's eye view of a portion of the City of Calgary, looking North from 8th Ave., Aug. 1911*** [advertisement]. (1911, August). Calgary: The Land and General Investment Company Limited. Glenbow Western Research Centre – University of Calgary, NA-1209-1. https://glenbow.ucalgary.ca/digital/ (Digital Identifier: NA-1209-1)

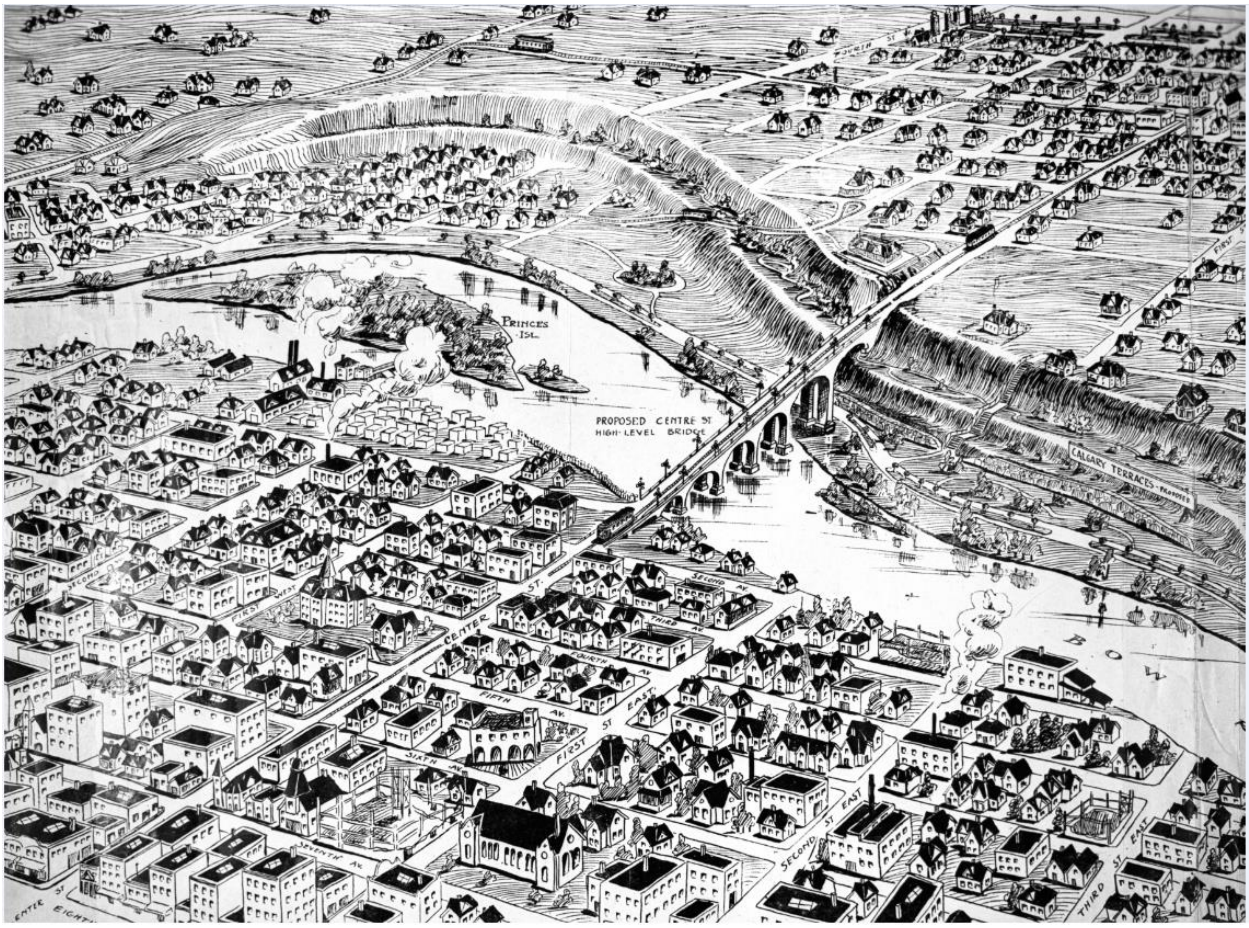


Courtesy of Glenbow Archives, Archives and Special Collections, University of Calgary. Image considered to be in the public domain.

This view of Calgary's central downtown and areas to the north was published as a print advertisement for the Tuxedo Park subdivision owned by The Land and General Investment Company Limited. Manager of this company was C. A. Owens who also published the promotional booklet *The story of Calgary, 1911 and Tuxedo Park* (see views #2 & #3). It is apparent that this view is very similar to the preceding one (#4) but shows a larger swath of the city and has as its focus the Tuxedo Park land development. This lithograph was produced by the Calgary Engraving Co. and has the name Lovewell[3] at the lower-right corner. The artist is perhaps H. M. Burton as he produced several other views advertising Tuxedo Park.

[3] Lovewell is probably the name of a real estate agent. A Metzner & Lovewell, Agencies Ltd. advertisement appears in the Calgary Herald newspaper on January 23, 1912.

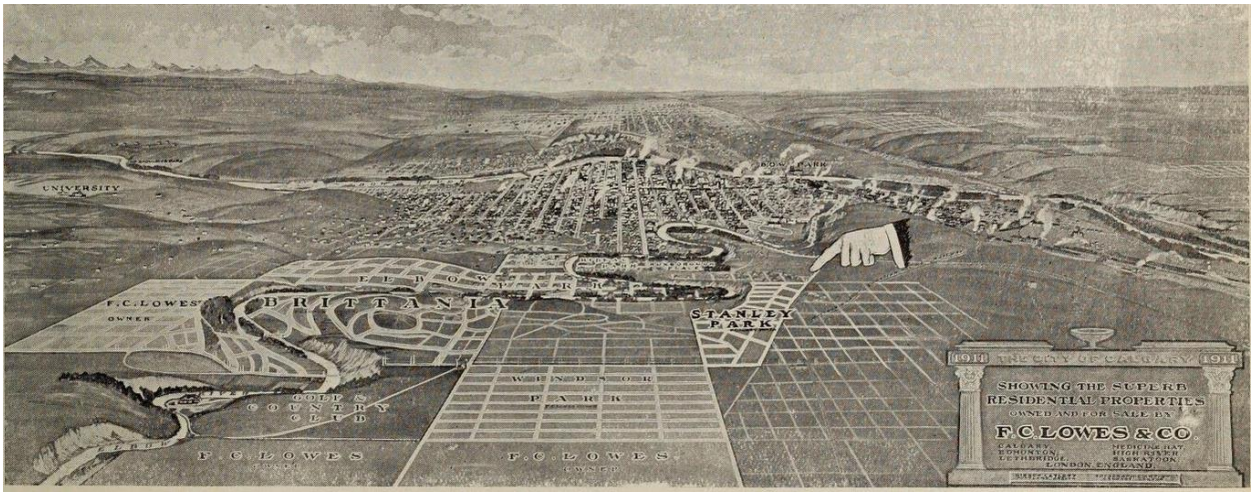
5b. ***A bird's eye view of a portion of the City of Calgary, looking North from 8th Ave., Aug. 1911*** [close-up of advertisement]. (1911, August). Calgary: The Land and General Investment Company Limited. Glenbow Western Research Centre – University of Calgary, NA-1209-2. https://glenbow.ucalgary.ca/digital/ (Digital Identifier: NA-1209-2)



Courtesy of Glenbow Archives, Archives and Special Collections, University of Calgary. Image considered to be in the public domain.

Street names and building details can be clearly made out in this close-up of view #5a which encompasses the area of what is today the City of Calgary's central downtown.

6. Catlett, G. (1911). **The City of Calgary 1911 showing the superb residential properties owned and for sale by F. C. Lowes & Co**. [map]. In Jennings Publishing Company, *Merchants and manufacturers record: Calgary, sunny Alberta, the industrial prodigy of the great west*. Calgary: Author. (p. 95). https://archive.org/details/calgarysunnyalbe00jenn/page/94/mode/2up

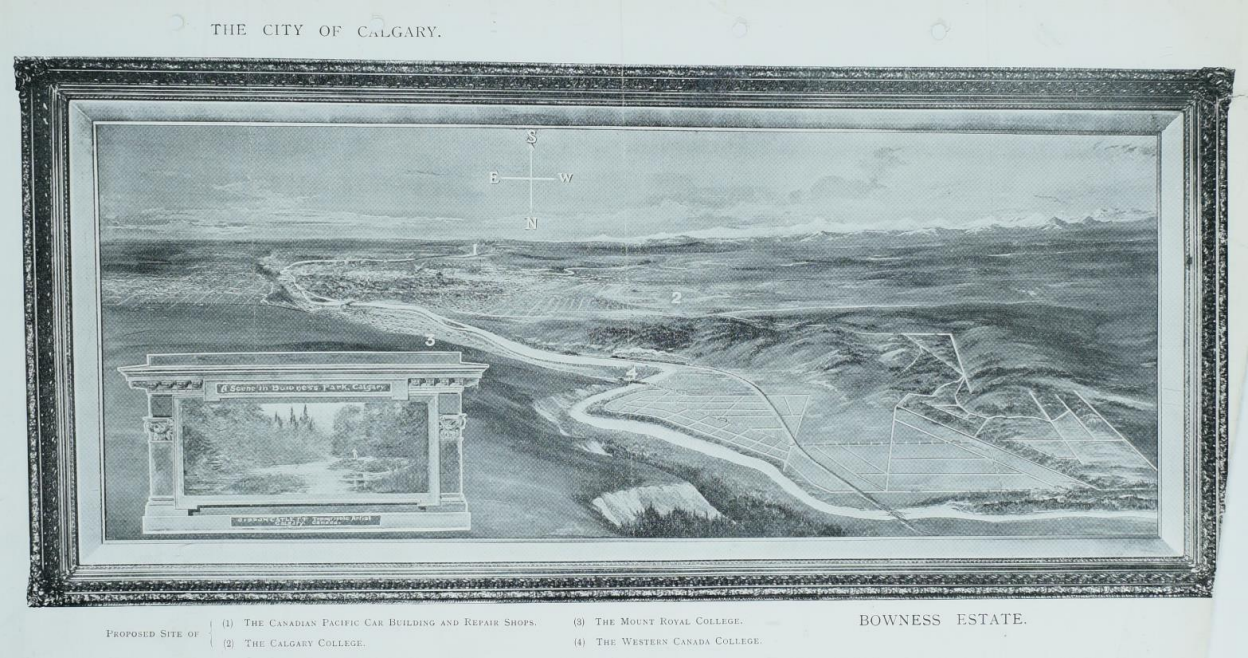


Courtesy of Internet Archive, Uploaded by Queen's University Library. Image considered to be in the public domain.

In 1911 a "souvenir book" containing more than three hundred photographs of Calgary was produced by the Jennings Publishing Company to "…truthfully represent the City of Calgary, and show what the city really has to offer the homeseeker, investor, merchant and manufacturer." Included was the above view produced by American "topographic artist" Gibson Catlett for real estate developer Fred Lowes of F. C. Lowes & Co., then considered the city's most successful real estate investor. This view was first produced by Catlett as a painting for the F. C. Lowes and Co. exhibit at Calgary's first annual land show in November, 1911.[4] The focus of this north-facing view are Lowes' extensive Calgary landholdings which included properties for sale in the subdivisions of Bow Park, Elbow Park, Rideau Park and Roxborough Place, Stanley Park, Brittania, and Windsor Park.

[4] The Calgary Herald (1913, November 13, p. 13) reported there was, "…a huge landscape painting of the city, four feet by ten feet, executed by Gibson Catlett, which cost $1,000. The picture shows every building in the city on canvass, and an excellent view of the Rocky mountains can be seen."

7. Catlett, G. (ca. 1911). ***The City of Calgary. Bowness Estate*** [advertisement showing painting]. Board of Trade: Companies Registration Office: Files of Dissolved Companies fonds (Company No: 121035; Bowness Estates Ltd. BT 31/20554). The National Archives, Kew, U.K.

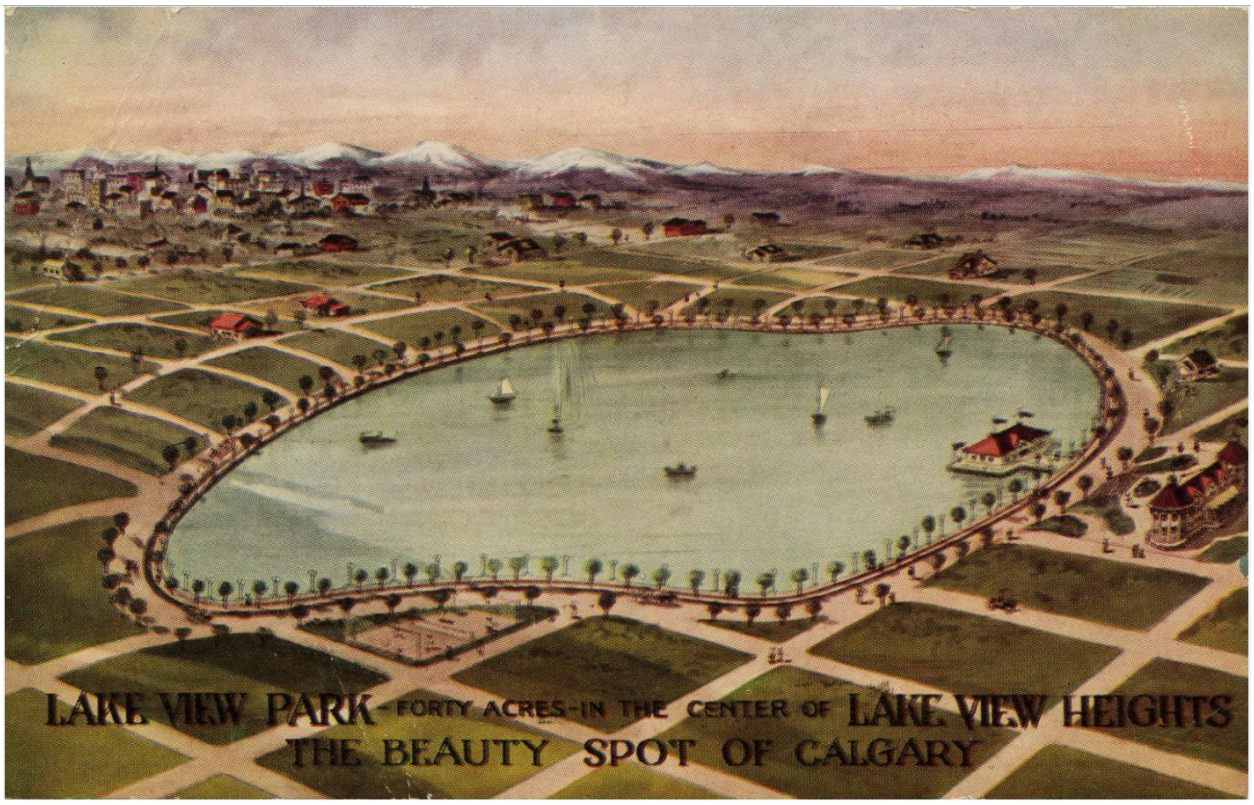


Courtesy of The National Archives [U.K.]. Permission received from The National Archives [U.K.] to reproduce image.

Developer John Hextall had grand visions of turning his Bowness-area landholdings into an exclusive residential subdivision for Calgary, located six miles to the east. This advertisement contains a reproduction of a painting by Gibson Catlett, topographic artist, showing the proposed Bowness Estate subdivision in 1911.[5] The inset displays "A Scene in Bowness Park, Calgary." The numbers on the painting indicate the proposed sites of (1) The Canadian Pacific Car Building and Repair Shops; (2) The Calgary College; (3) The Mount Royal College, and; (4) The Western Canada College.

[5] In reporting about the J. Hextall exhibit at Calgary's first annual land show, the Calgary Herald (1911, November 13, p. 13) mentioned that, "A large painting of the [Bowness] district was executed by Gibson Catlett, the well known American artist."

8. ***Lake View Park, forty acres, in the center of Lake View Heights, the beauty spot of Calgary*** [postcard]. (ca. 1912). Calgary: A. O. Jennings & E. J. Foster. Postcards From the Past, Calgary Public Library, PC_925. http://cdm16114.contentdm.oclc.org/cdm/ref/collection/p280501coll15/id/2843

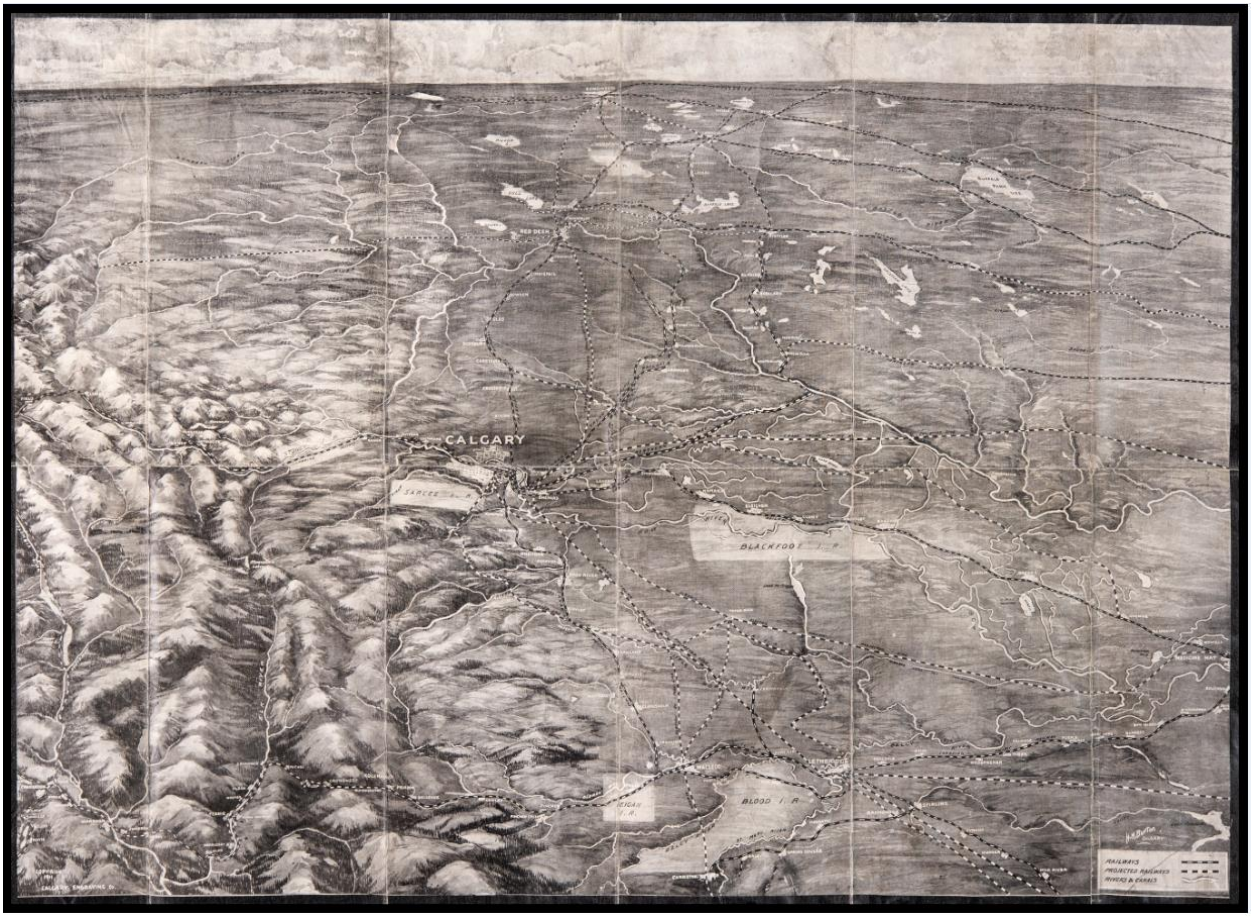


Courtesy of Calgary Public Library. Image considered to be in the public domain.

Calgary realtors A. O. Jennings and E. J. Foster offered this postcard showing a view of the proposed Lake View Park to anyone visiting their properties for sale in Lake View Heights. This subdivision appears to have been a district registered and approved by the city but never developed. Lake View Heights was to be located three miles northeast from Calgary's post office.

SOUTHERN ALBERTA

9. Burton, H. M. (1911). ***What sunny Alberta is like: A birdseye view of Calgary with the surrounding & tributary country & interesting facts concerning the banner province of Canada*** [map]. Calgary: Calgary Engraving Co. https://www.bac-lac.gc.ca/eng/CollectionSearch/Pages/record.aspx?app=fonandcol&IdNumber=4155910



Courtesy of University of Calgary Archives and Special Collections. Image considered to be in the public domain.

This map by artist H. M. Burton shows a panoramic bird's-eye view of the entirety of Alberta south of Edmonton as well as the southeastern portion of British Columbia as far as Cranbrook. It was published in 1911[6] as the main feature of Calgary promotional folder entitled *What sunny Alberta is like*. Cities, towns and First Nation reserves throughout the province are labelled. Railways, projected railways, rivers and canals are prominently displayed.

[6] In the Calgary Herald newspaper article, "A Birdseye View of Calgary District" (1910, August 22, p. 3), it was reported that, "The physical features of the country west as far as Fernie and Cranbrook, east as far as Medicine Hat, north as far as Edmonton, and south to the boundary, will be fully described and illustrated in the special map H. M. Burton is preparing for the city. This map will be printed on a folder, and 50,000 of these will be available for distribution for advertising purposes. The whole will be in the form of a birdseye view, showing the nature of the ground, where rolling, hilly, or flat prairie, the rivers, highways, cities, towns and villages, etc. "What Southern Alberta Looks Like," is the subject of the folder."

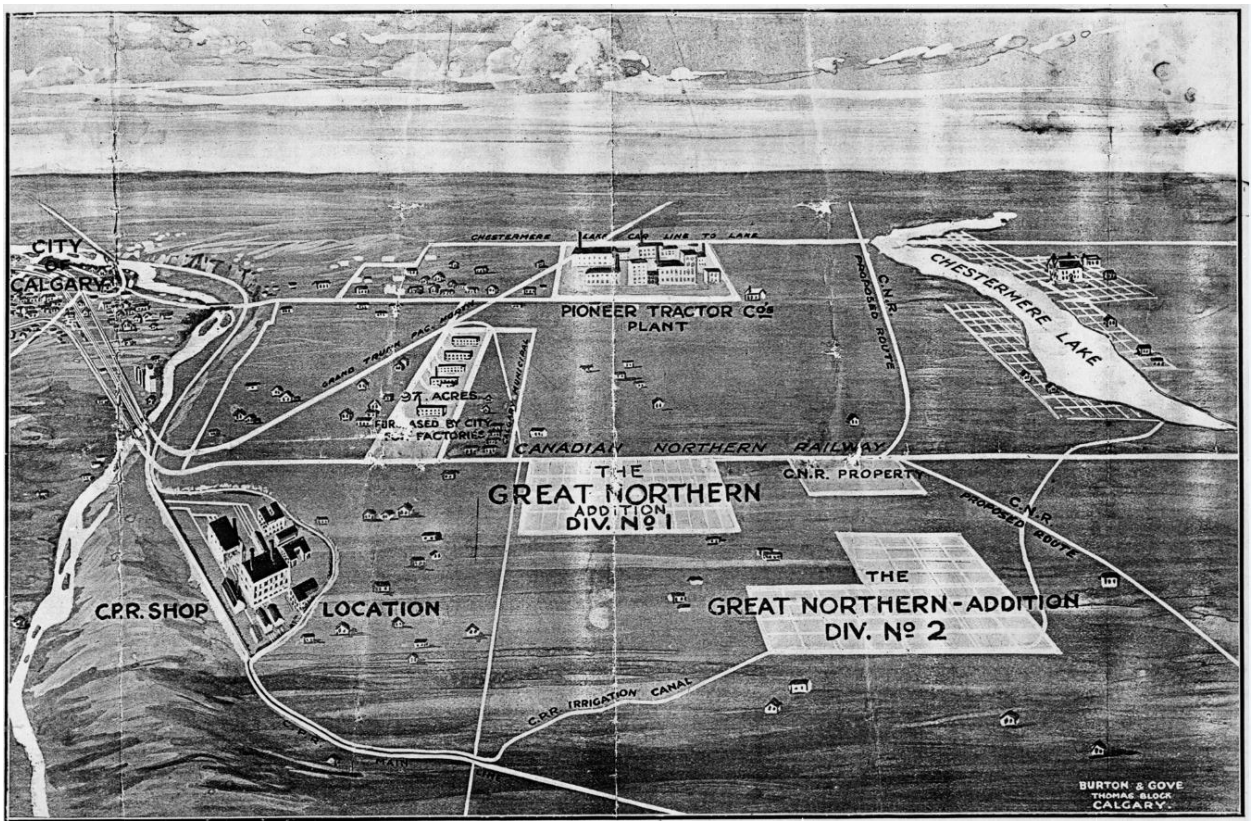
10. Catlett, G. (n.d.). ***Topographic landscape, irrigation block of the Canadian Pacific Railway, Alberta, Canada***. [tempera painting]. Object 60.17, Glenbow Museum Art Collection, Calgary, AB.

Courtesy of Glenbow Museum, Calgary. Permission received from Glenbow Museum, Calgary to reproduce image.

This large tempera painting by Gibson Catlett, topographic artist, displays the western, central and eastern sections of the Irrigation Block of the Canadian Pacific Railway. The cities of Calgary, Edmonton and Medicine Hat are visible along with an intricate network of irrigation canals. A Glenbow Archives fond description[7] indicates that the colonization of the Irrigation Block was originally administered by the CPR Land Department's Calgary office. In 1912, this responsibility was transferred to the Department of Natural Resources. This painting was likely used to promote settlement within the CPR's southern Alberta landholdings.

[7] glen-564 - Canadian Pacific Railway Land Settlement and Development fonds (https://albertaonrecord.ca/canadian-pacific-railway-land-settlement-and-development-fonds)

11. Burton & Gove. (ca. 1911). ***[Advertisement for development in industrial section of Calgary, Alberta]***. Calgary: Author. Glenbow Western Research Centre – University of Calgary, NA-4562-1. https://glenbow.ucalgary.ca/digital/ (Digital Identifier: NA-4562-1)

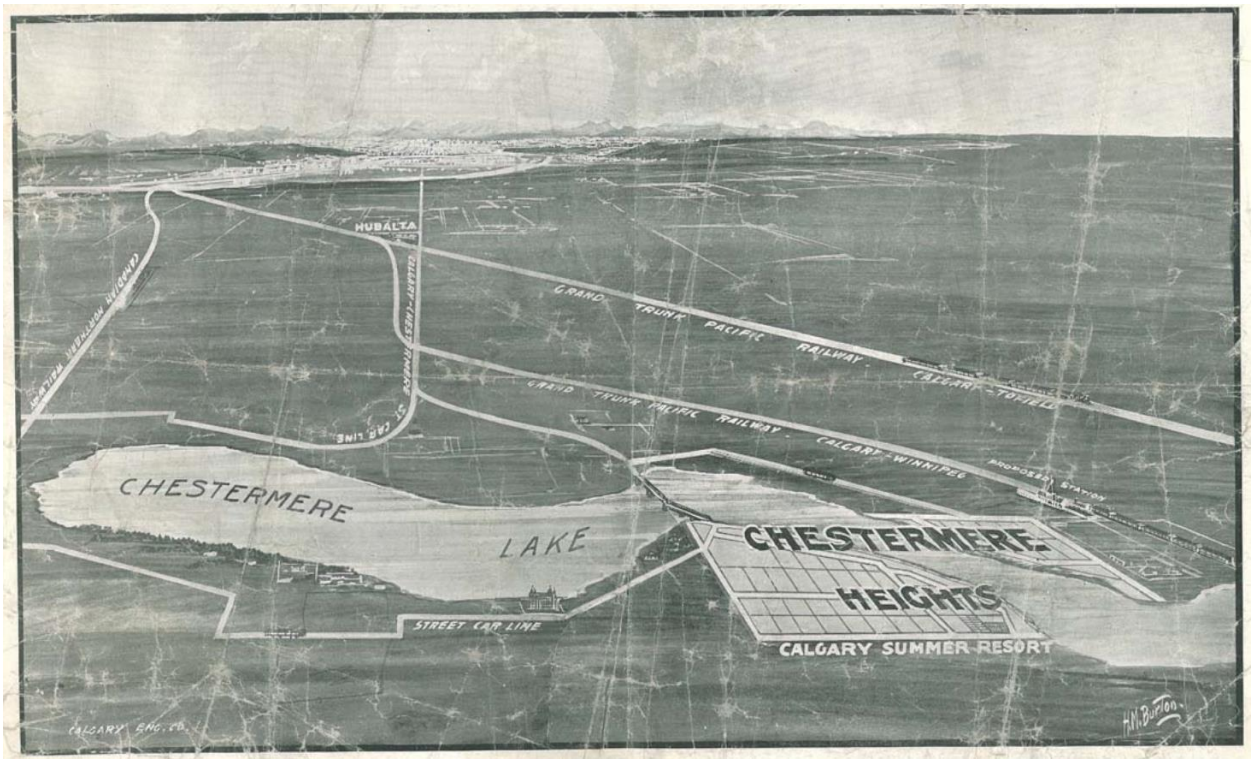


Courtesy of Glenbow Archives, Archives and Special Collections, University of Calgary. Image considered to be in the public domain.

This view was created by artists Burton and Gove in about 1911 to advertise real estate for sale east of Calgary towards Chestermere Lake.[8] It highlights numerous proposed industrial developments (e.g., Pioneer Tractor Co. Plant, Great Northern Addition Div. No. 1 & 2, C.P.R. Shop) and railway routes that would enhance the appeal of properties for sale in this area.

[8] Chestermere Lake is a man-made reservoir that was built as a "balancing pool" in the CPR's Western Irrigation System.

12. Burton, H. M. (ca. 1911). ***[Advertisement for Chestermere Heights]***. Calgary: Calgary Engraving Co.



Courtesy of Chestermere Historical Foundation. Image considered to be in the public domain.

This westward-facing view drawn by H. M. Burton in about 1911 was produced as an advertisement showing the location of the Chestermere Heights real estate development. A streetcar line between Calgary and Chestermere Lake shown on this view was proposed but never built.

13. Burton & Gove. (1912, April 9). **[Advertisement for Chestermere Lake by The Chestermere-Calgary Townsite and Development Co., Limited]**. *Calgary Herald*, p. 15. https://www.newspapers.com/image/481560970/ & https://glenbow.ucalgary.ca/digital/ (Digital Identifier: NA-4421-1)

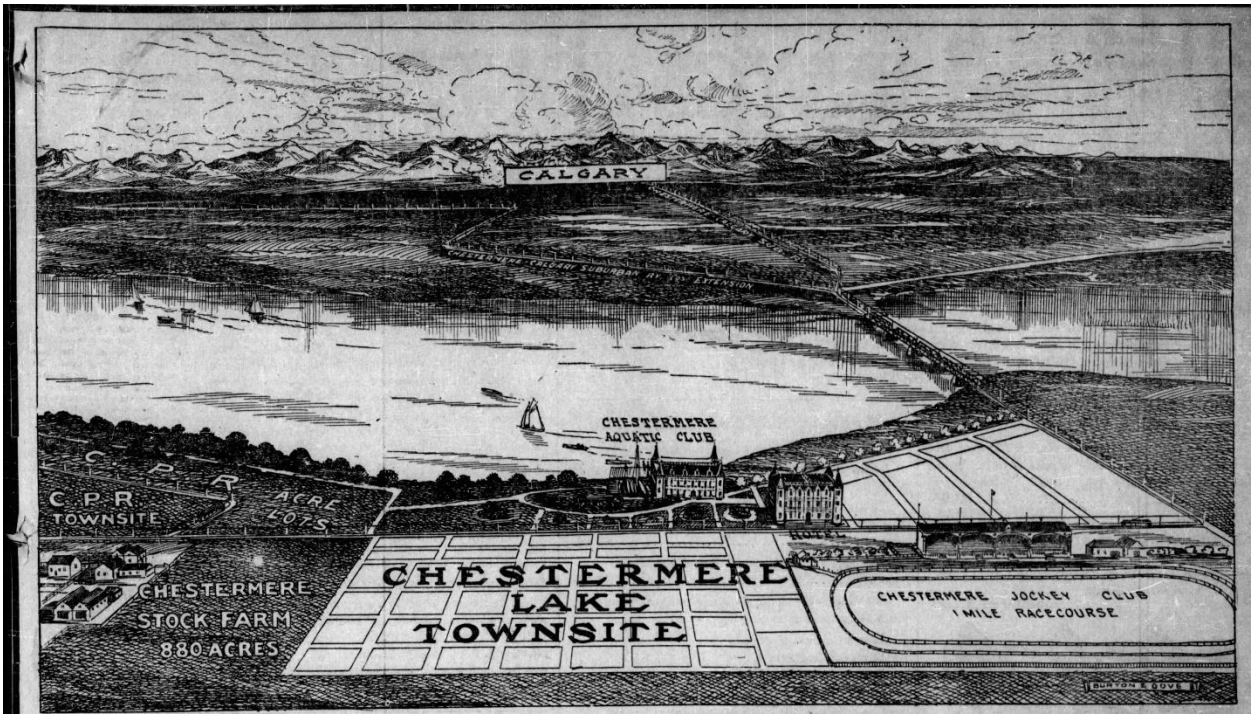


Image from historical newspaper content considered to be in the public domain.

The view was produced by artists Burton and Gove in about 1911 and appeared as part of a Chestermere-Calgary Townsite and Development Co., Limited newspaper advertisement in the *Calgary Herald*. As was the case for many real estate advertisements, grand developments such as the Chestermere Aquatic Club and the suburban railway were never built.

14. Burton & Gove. (1912, March 26). **[Advertisement for Bassano Heights]**. *Calgary Herald*, pp. 18-19. https://www.newspapers.com/image/481555471/

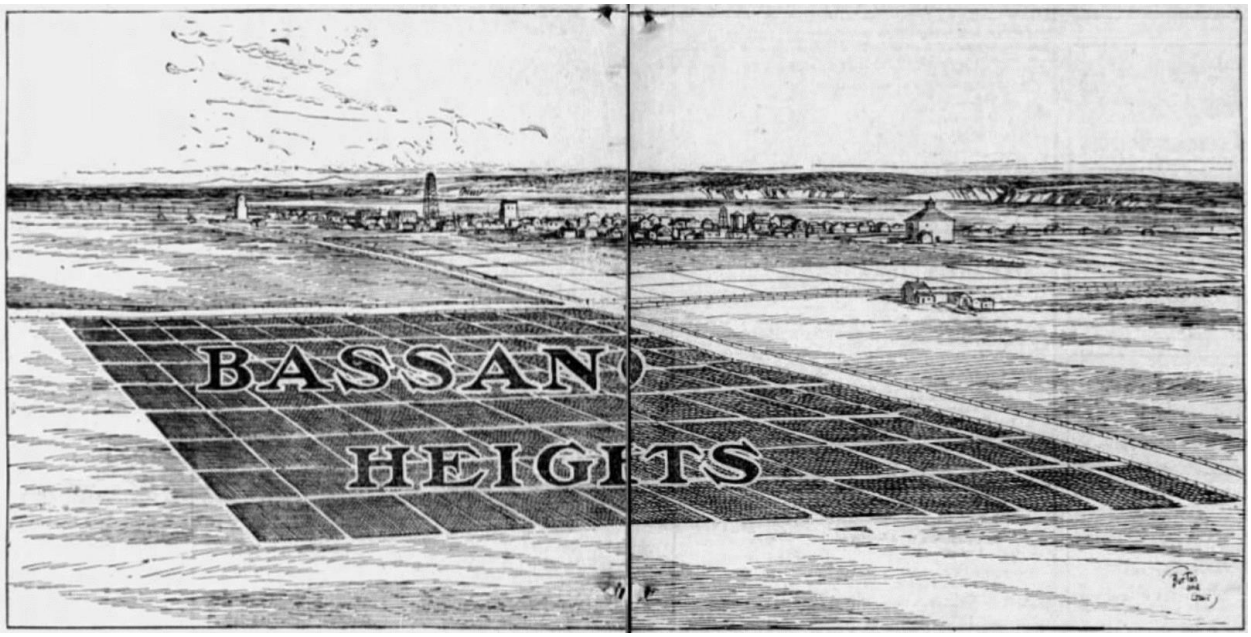
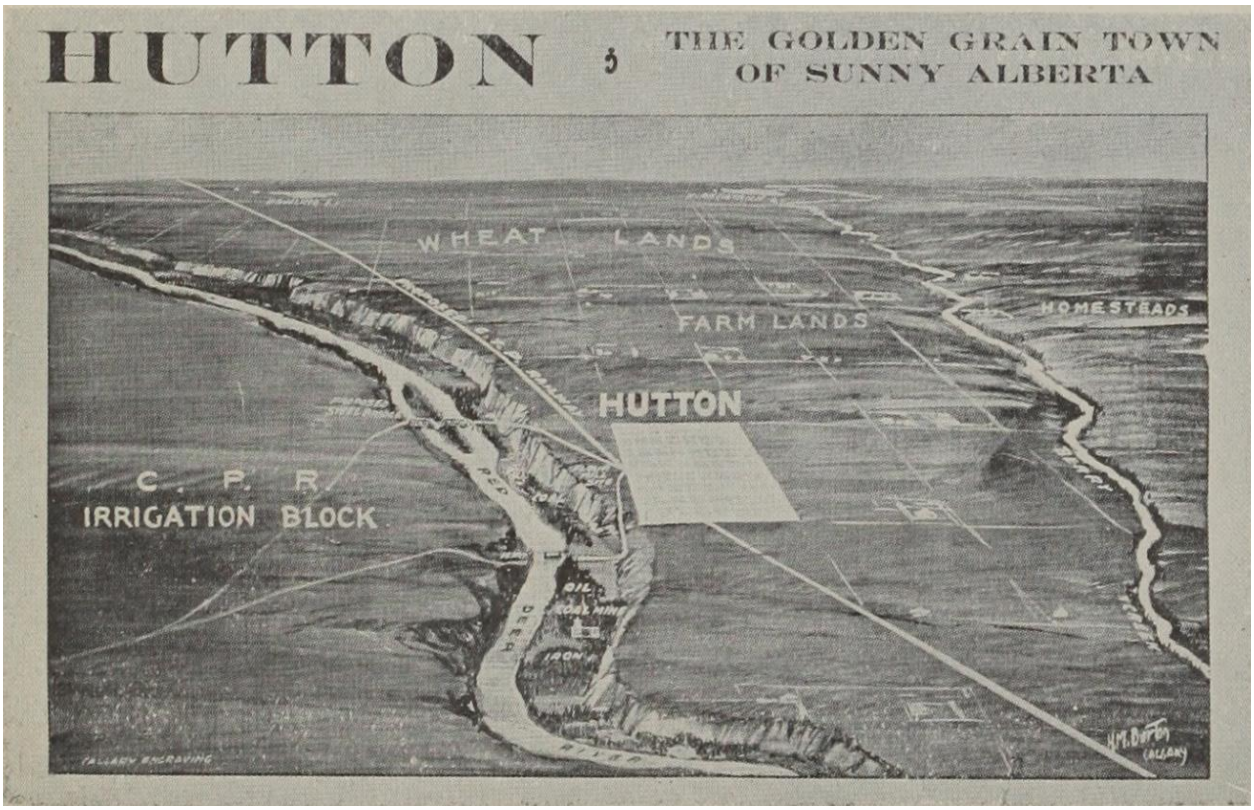


Image from historical newspaper content considered to be in the public domain.

A *Calgary Herald* newspaper advertisement for Bassano Heights in Bassano, Alberta appeared in 1912 and contained this view by artists Burton and Gove.[9] Alberta real estate developers would promote real estate sales even in smaller towns if the land happened to be advantageously located close to major railway lines. Bassano's proximity to the main line of the Canadian Pacific Railway between Calgary and Medicine Hat and its soon-to-be-built "Horse Shoe Bend" dam were prominently mentioned in the text of the advertisement. Interestingly, the ad's promotional slogan "best in the west by a dam site" remains in use today by the Bassano town office.

[9] According to the advertisement, "The picture was sketched last Saturday by H. M. Burton, the well-known Calgary artist, who was instructed to reproduce the view exactly and proportionately as regards location and surroundings."

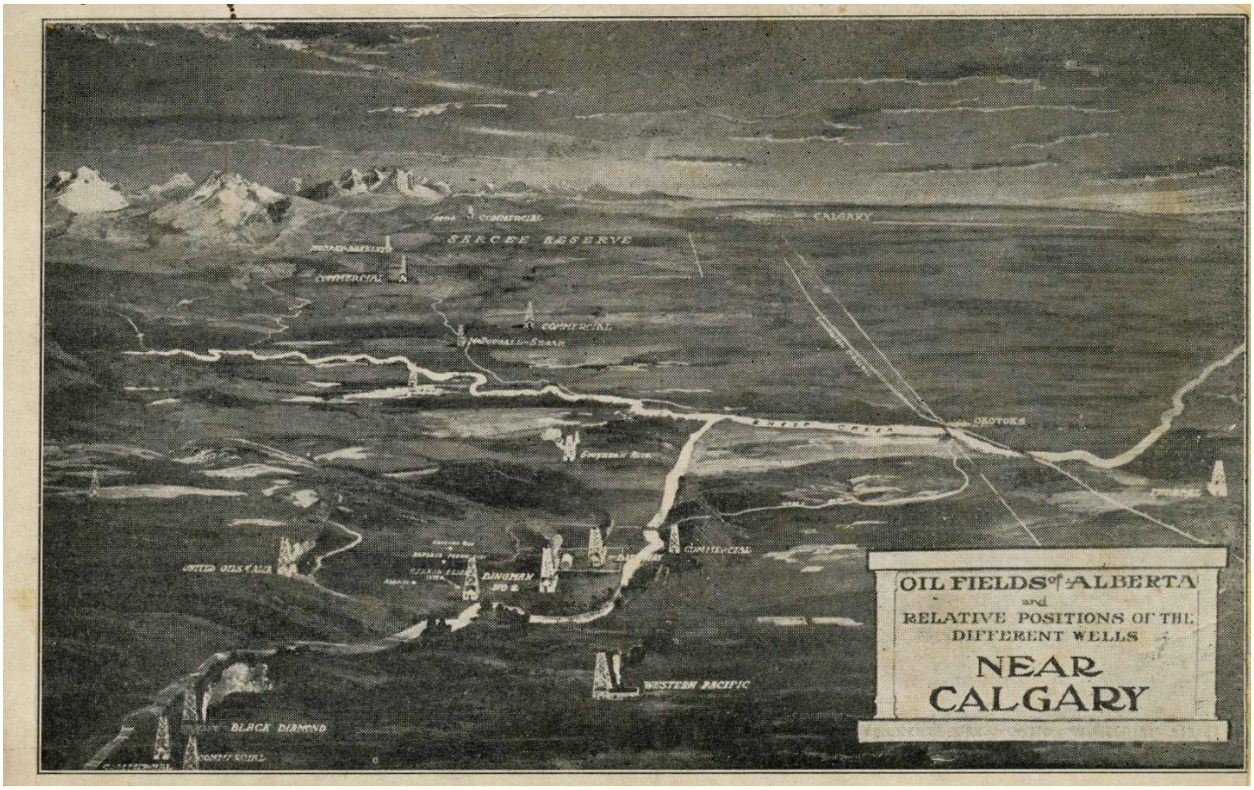
15. Burton, H. M. (1911). **Hutton, the golden grain town of sunny Alberta** [advertisement]. In Jennings Publishing Company, *Merchants and manufacturers record: Calgary, sunny Alberta, the industrial prodigy of the great west*. Calgary: Author. (p. 146).
https://archive.org/details/calgarysunnyalbe00jenn/page/146/mode/2up



Courtesy of Internet Archive, Uploaded by Queen's University Library. Image considered to be in the public domain.

This view of Hutton, Alberta drawn by H. M. Burton was included in the 1911 "souvenir book" produced by the Jennings Publishing Company to promote the City of Calgary. Hutton's location close to the C.P.R. Irrigation Block, Red Deer River and local coal mines hint at the region's enormous agricultural and industrial potential. The advertisement accompanying the view stated that Hutton was 85 miles due east of Calgary and close to a route surveyed by the Grand Trunk Pacific Railway.

16. ***Oil fields of Alberta and relative positions of different wells near Calgary*** [postcard]. (n.d). Postcards From the Past, Calgary Public Library, PC_1107. http://cdm16114.contentdm.oclc.org/cdm/ref/collection/p280501coll15/id/2626



Courtesy of Calgary Public Library. Image considered to be in the public domain.

Alberta's speculative real estate land boom of the 1910s peaked in 1912 and went bust in 1913. The province's fortunes were quickly revived when, on May 14, 1914 the Dingman Number One Well struck oil in Turner Valley and kicked off the province's first oil boom. This postcard view by an unknown artist identifies company names and oil well locations in Turner Valley, Alberta. Identifiable names of oil wells are Dingman Nos. 1 & 2, Black Diamond, Commercial, Western Pacific and United Oils of Alta. The relative positions of the City of Calgary, Okotoks and the Sarcee Reserve are also shown. This postcard may have been used in advertising to sell oil company shares to prospective investors.

LETHBRIDGE, ALBERTA

17. Catlett, G. (1912). ***City of Lethbridge***. [oil painting]. Object 1971.2, University of Lethbridge Art Gallery Collection, Lethbridge, AB.
https://opus.uleth.ca/bitstream/handle/10133/5121/Painting%2019712%20%28002%29

Courtesy of University of Lethbridge Art Gallery.

This large oil painting (42 in by 108 in) was created in 1912 by Gibson Catlett studios in Calgary, Alberta at a cost of $1,000 to advertise a real estate development in Lethbridge, Alberta called Dominion Square. The subdivision was extensively promoted by Mitford & Co. Real Estate in the *Lethbridge Herald* newspaper. A copy of the painting also appeared in a sales brochure advertising Lethbridge real estate and the city's coal mining industry.

MEDICINE HAT, ALBERTA

18. **[Advertisement for Ashton Place sub-division, Medicine Hat, Alta. By F. C. Lowes & Company]**. (1913, March 10). *Calgary Herald*, p. 15. https://www.newspapers.com/image/480310061/

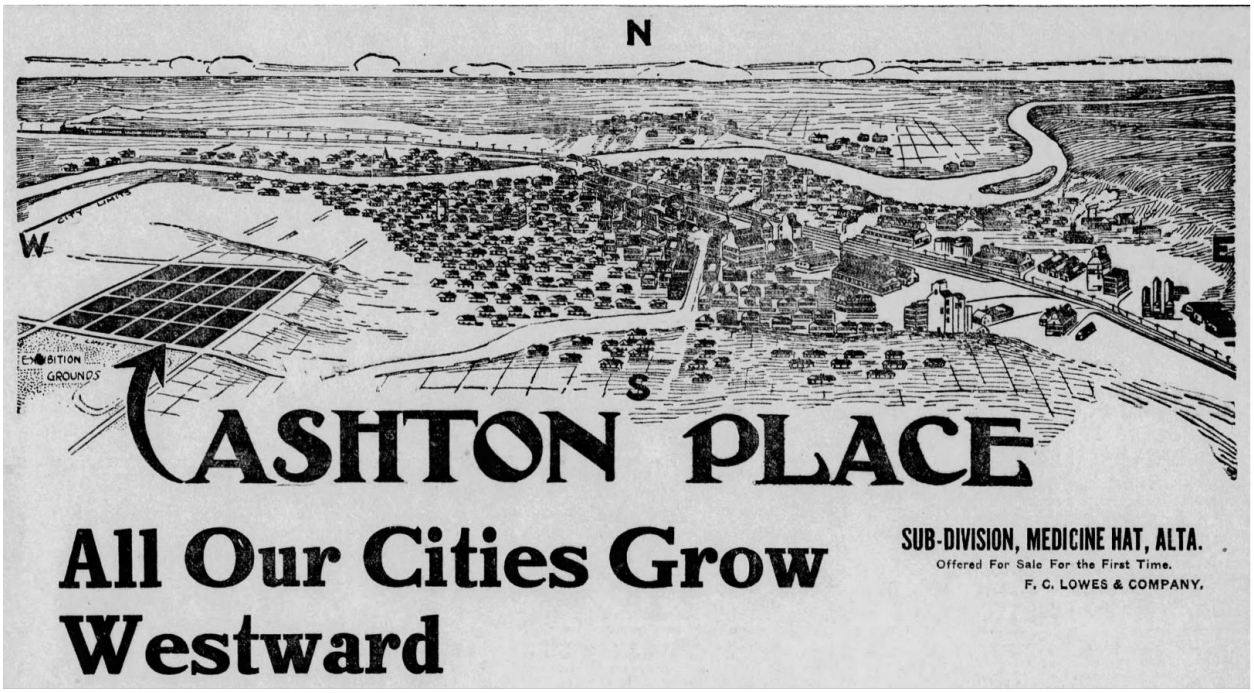
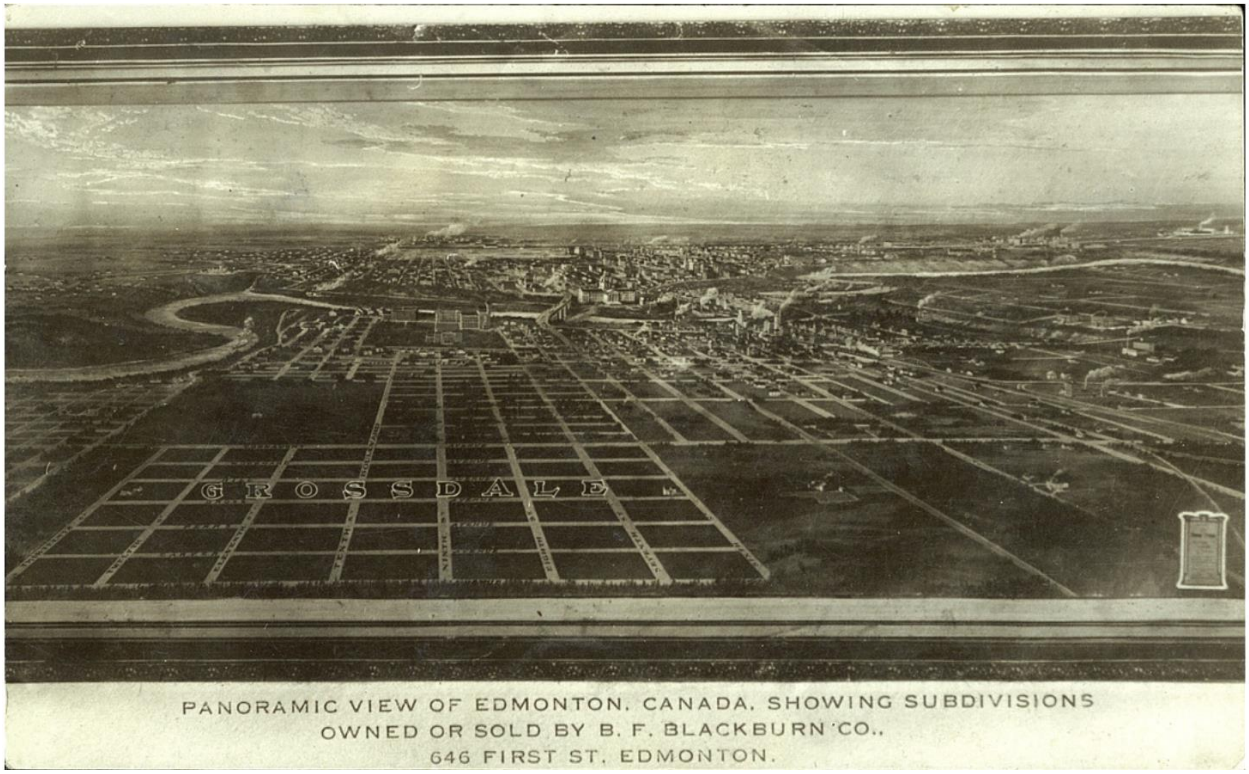


Image from historical newspaper content considered to be in the public domain.

This view of the Ashton Place subdivision in Medicine Hat, Alberta appeared in a *Calgary Herald* (1913, March 10, p. 15) newspaper advertisement. A separate ad in the *Medicine Hat News* (1913, March 18, p. 8) showed this development from a southward-facing direction. Yet another view in the *Edmonton Journal* (1913, March 7, p. 10) featured a billowing smokestack that seemed designed to call attention to the burgeoning industrial development taking place in the city. Property owner Fred Lowes of the F. C. Lowes & Company was Alberta's foremost promoter of land sales and had offices in Medicine Hat, Calgary, Edmonton, Lethbridge and even as far afield as London, England. The artist who produced this view is unknown though it seems plausible that it was Gibson Catlett studios as Catlett had previously produced other views for Lowes.

EDMONTON, ALBERTA

19. Catlett, G. (ca. 1912). ***Panoramic view of Edmonton, Canada showing subdivisions owned or sold by B. F. Blackburn Co., 646 First St. Edmonton*** [postcard]. Brantford, ON: Stedman Bros. Limited. Peel's Prairie Provinces, University of Alberta Libraries, Postcard 13652. http://peel.library.ualberta.ca/PC/013/PC013652



Courtesy of Peel's Prairie Provinces, University of Alberta Libraries (CC BY-NC 3.0). Image considered to be in the public domain.

Edmonton real estate agents also used the services of viewmakers to promote land sales in the Alberta's capital city. This view appeared on a 1912 postcard which incorporated a reproduction of a landscape painting by Gibson Catlett [10] advertising the Grossdale subdivision owned by B. F. Blackburn Co. In 1912, Grossdale was on the Edmonton's southern fringes in the recently-annexed community of Strathcona. Visible landmarks in this north-facing view include the University of Alberta campus, the High Level Bridge across the North Saskatchewan River, and the distinctive Alberta Legislature Building.

[10] The logo on the lower-right of the image is not legible but is typical of what appeared on Gibson Catlett's real estate landscape paintings. This large painting of Edmonton featuring the Grossdale subdivision was on display in a storefront window according to an article in the Edmonton Journal (1912, February 3, p.11).

20. Byron-May Co. Ltd. & Whitehorne, H. S. (1911, August 12). **Buy a home in "Parkdale" (Strathcona) the place of opportunities** [advertisement]. *Edmonton Journal*, p. 5. https://www.newspapers.com/image/468763870/

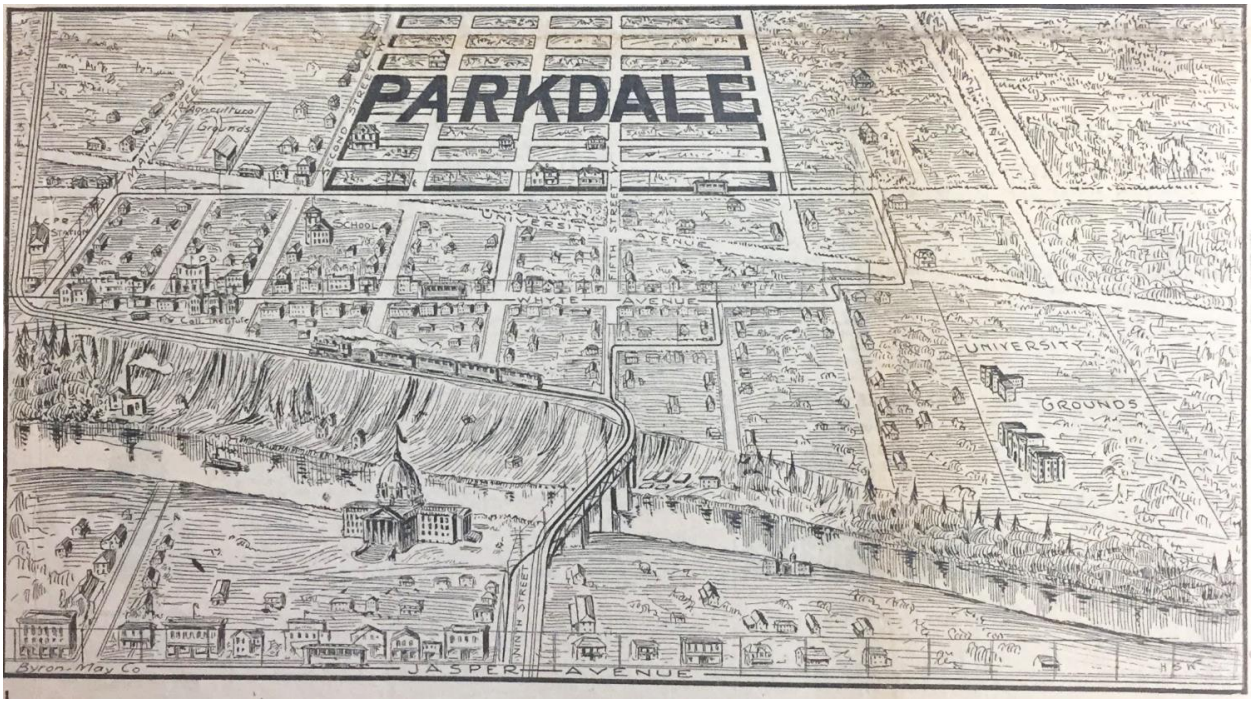
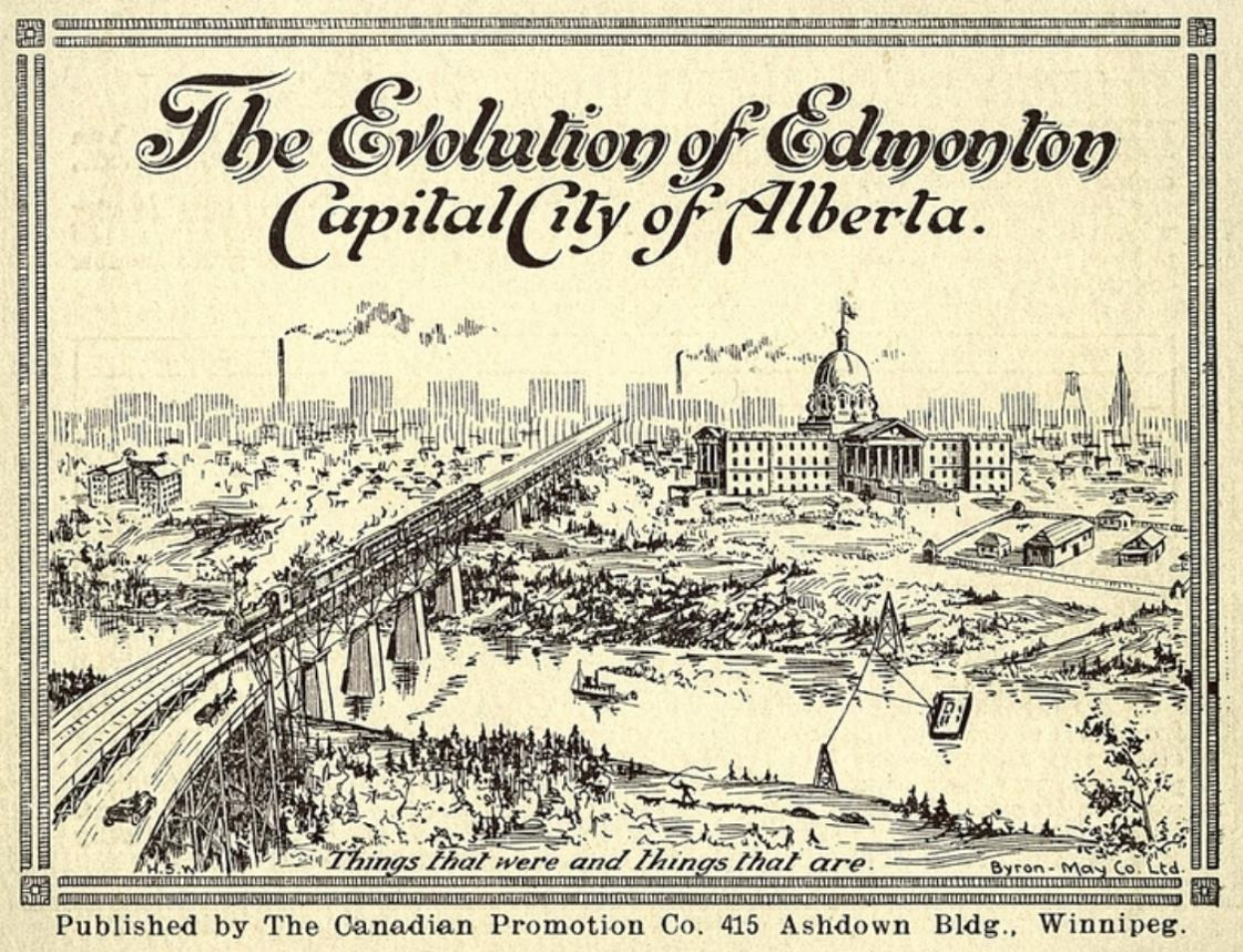


Image from historical newspaper content considered to be in the public domain.

An *Edmonton Journal* newspaper advertisement for the Parkdale subdivision in Strathcona[11] includes this lithographic-style view. It shows an area south of Jasper Avenue (Edmonton's main street) looking across the North Saskatchewan River toward Strathcona. The view highlights Parkdale's proximity to Jasper Avenue, Whyte Avenue, streetcar services, the University Grounds and the Alberta Legislature Building. The initials "H S W" appear in the lower-right corner of the image and would indicate the artist responsible for creating the lithographic version of this view. Henderson's 1912 Edmonton City Directory lists H. Stanley Whitehorne, artist, as an employee of Byron-May Co.

[11] Strathcona was annexed by Edmonton in 1912.

21. Byron-May Co. Ltd. & Whitehorne, H. S. (1913). ***The evolution of Edmonton, capital city of Alberta*** [booklet]. Winnipeg: The Canadian Promotion Co. Peel's Prairie Provinces, University of Alberta Libraries, Postcard 6361. http://peel.library.ualberta.ca/postcards/PC006361.html



Courtesy of Peel's Prairie Provinces, University of Alberta Libraries (CC BY-NC 3.0). Image considered to be in the public domain.

This view of central Edmonton comes from the cover of a promotional "souvenir booklet" of printed photographs of the city published in 1913. The statement "Things that were and things that are" seems to refer to the contrast between newer structures (e.g., High Level Bridge, Alberta Legislature Building) and those that were already quite old (e.g., the Hudson's Bay Co. Fort which shared the grounds of the Legislature until it was torn down entirely in 1915). Byron-May Co.'s artist H. Stanley Whitehorne probably created the lithographed version of this view as the initials "H S W" appear in the lower-left corner of the image.

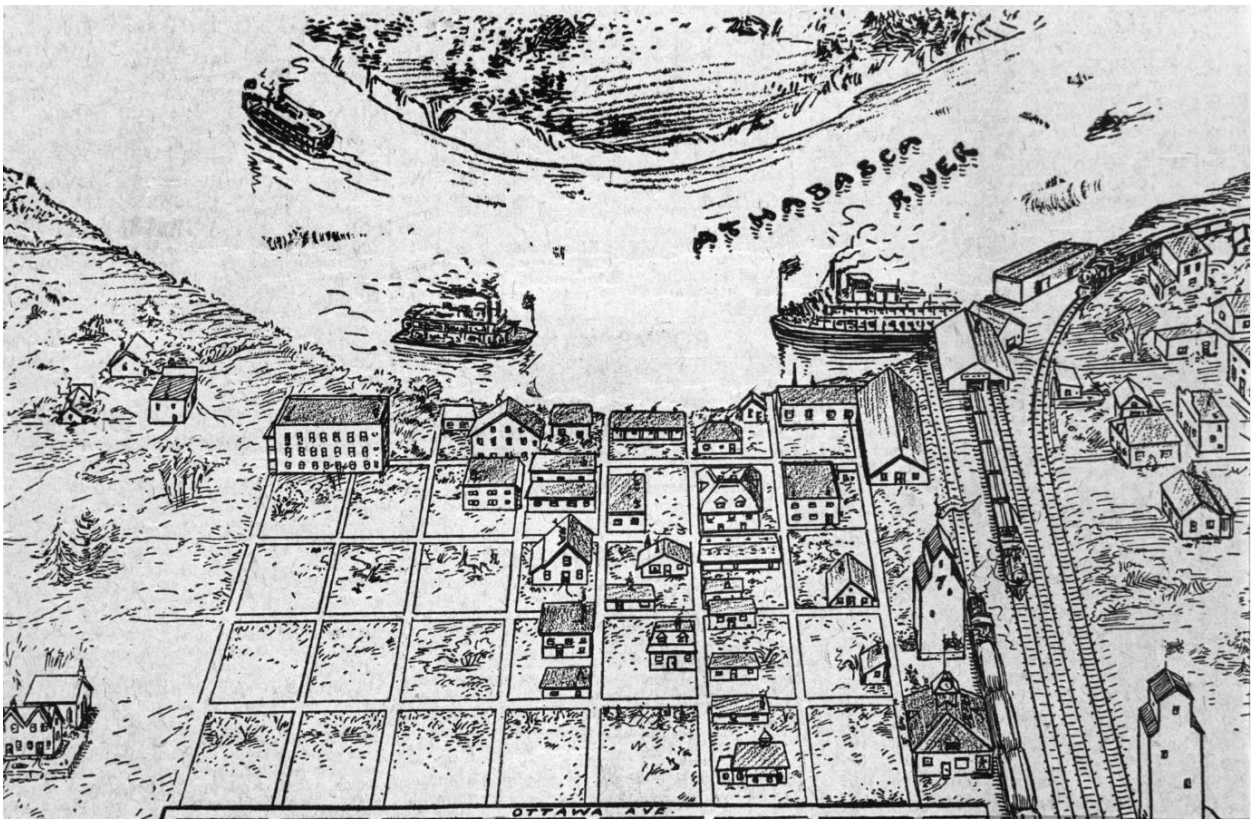
NORTHERN ALBERTA

22a. Athabasca Land Company (1911, July 12). ***Gateway Heights, Athabasca Landing, "Where rail and water meet."*** [newspaper advertisement]. Glenbow Western Research Centre – University of Calgary, NA-2092-1. https://glenbow.ucalgary.ca/digital/ (Digital Identifier: NA-2092-1).

Courtesy of Glenbow Archives, Archives and Special Collections, University of Calgary. Image considered to be in the public domain.

Steamships can be seen plying the waters of the Athabasca River in this view from 1911 which appeared in a newspaper advertisement promoting the Gateway Heights subdivision for the Athabasca Land Company. Athabasca Landing (today known as Athabasca) experienced a population and land boom between 1906 and 1914 which was in part due to the arrival in 1912 of Canadian National Railway tracks to the village. It was anticipated that Athabasca Landing would become a key rail and river freight junction for Alberta's Peace Country to the northwest as well as Fort McMurray to the northeast.

22b. Athabasca Land Company (1911, July 12). ***Gateway Heights, Athabasca Landing, "Where rail and water meet."*** [close-up of newspaper advertisement]. Glenbow Western Research Centre – University of Calgary, NA-2092-2. https://glenbow.ucalgary.ca/digital/ (Digital Identifier: NA-2092-2).



Courtesy of Glenbow Archives, Archives and Special Collections, University of Calgary. Image considered to be in the public domain.

This is a close-up of view #22a. The Canadian National Railway tracks and depot is prominent in this 1911 view though it was not completely built until 1912.

23. McCutcheon Bros. (1911, June 3). **Athabasca Landing, where rail meets sail, Gateway Heights** [advertisement]. *Calgary Daily Herald*, p. 12. https://www.newspapers.com/image/481611380/

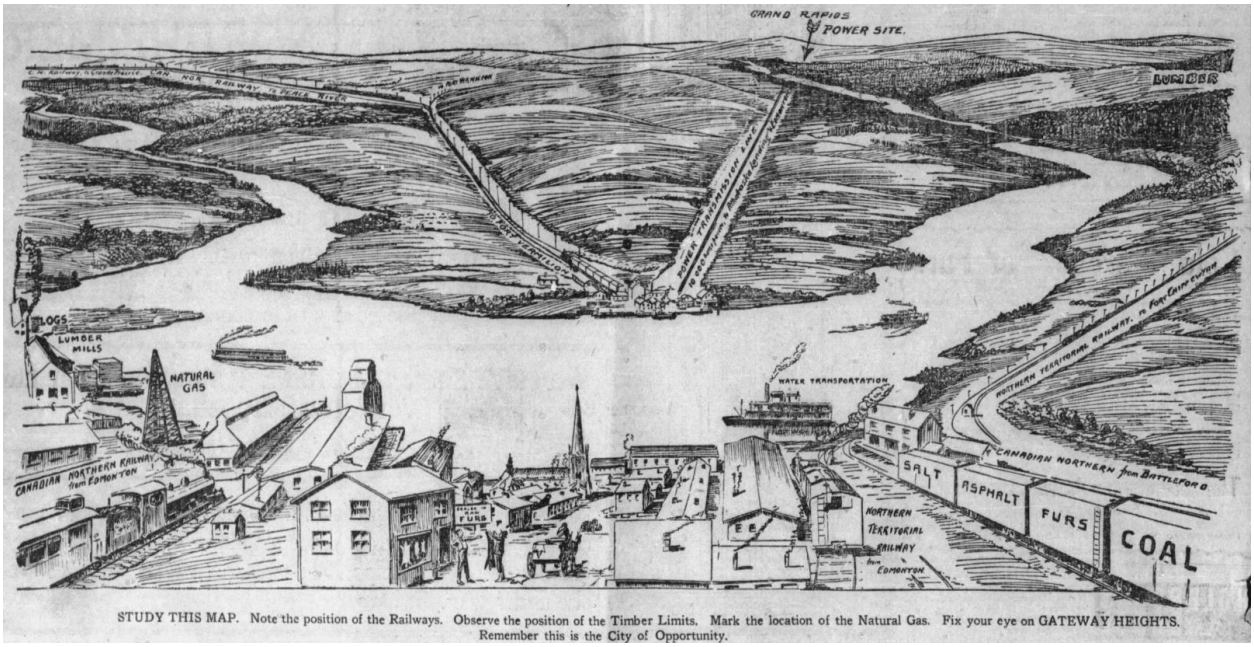
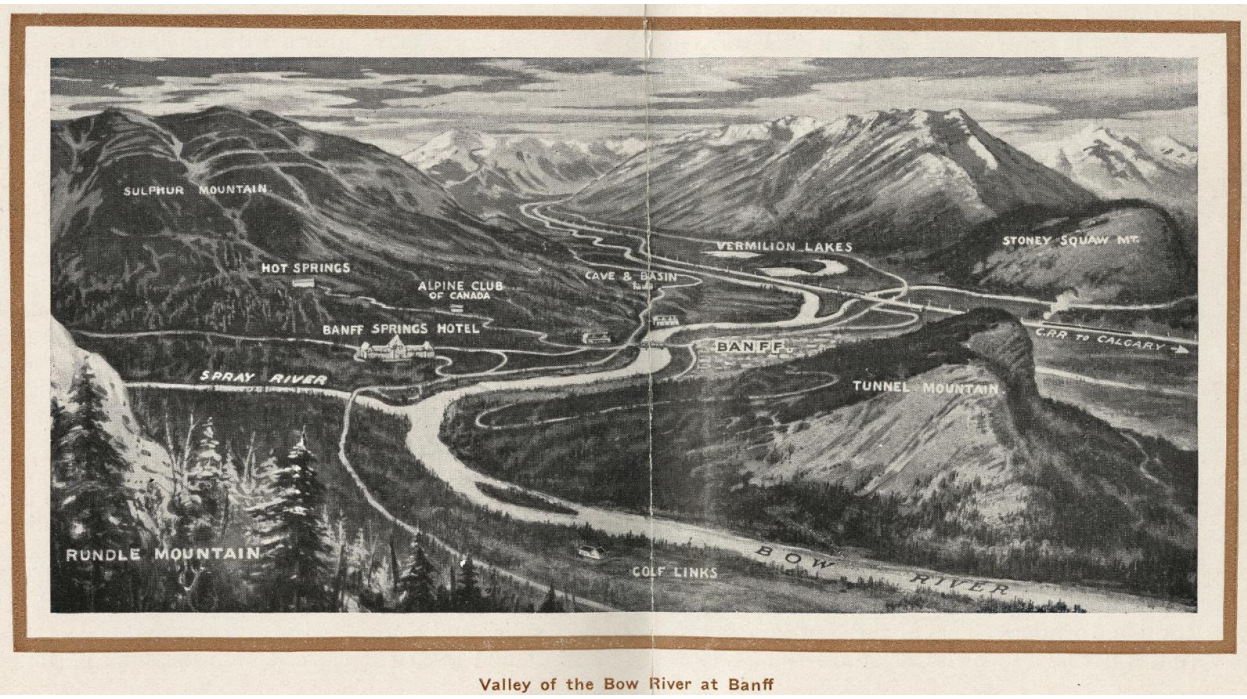


Image from historical newspaper content considered to be in the public domain.

This view is from a *Calgary Herald* newspaper advertisement for the Gateway Heights subdivision in Athabasca Landing being promoted by McCutcheon Bros., Calgary. The region's abundant natural resource industries and anticipated railway lines are prominently displayed.

CANADIAN ROCKY MOUNTAINS

24. **Valley of the Bow River at Banff** [map]. (ca. 1915). In Canadian Pacific Railway Company, *Resorts in the Canadian Rockies*. (p. 2). The Chung Collection, Rare Books and Special Collections, University of British Columbia Library (CC_TX_200_008_004_002). https://dx.doi.org/10.14288/1.0229044



Permission received to reproduce image courtesy of Rare Books and Special Collections, University of British Columbia Library.

The pamphlet *Resorts in the Canadian Rockies* was used in about 1915 to advertise C.P.R.-owned hotels. It contains a map of the Valley of the Bow River at Banff, Alberta. The view shown in this tourist map identifies Banff's main attractions and the castle-like Banff Springs Hotel. The artist who created this view is unknown but its style is similar to those done by Gibson Catlett.

25. **Canadian Rockies showing main line of Canadian Pacific Ry. with branch lines & steamship connections**. [map]. (ca. 1915). In Canadian Pacific Railway Company, *Resorts in the Canadian Rockies*. (p. 26). The Chung Collection, Rare Books and Special Collections, University of British Columbia Library (CC_TX_200_008_004_019). https://dx.doi.org/10.14288/1.0229044

Permission received to reproduce image courtesy of Rare Books and Special Collections, University of British Columbia Library.

A large colour fold-out map was included within the pamphlet entitled *Resorts in the Canadian Rockies* used to advertise C.P.R.-owned railways and hotels in about 1915. The map shows a panoramic bird's-eye view of the southern half of Alberta and British Columbia from Victoria, B.C. to Calgary, Alberta. C.P.R. and steamship lines are displayed prominently.

ASSOCIATION OF CANADIAN MAP LIBRARIES AND ARCHIVES

BULLETIN

Book Reviews

Edited by Sarah Simpkin

Books Reviewed in this Issue:

Focus on Geodatabases in ArcGIS Pro
by David W. Allen
Reviewed by Barbara Znamirowski

GIS for Science: Applying Mapping and Spatial Analytics
by DawnWright and Harder, Christian (editors).
Reviewed by Martin Chandler

Focus on Geodatabases in ArcGIS Pro

Barbara Znamirowski
Trent University

Allen, David W. ***Focus on Geodatabases in ArcGIS Pro.*** Redlands, California: Esri Press, 2019. 251p. $59.99 US, ISBN 9781589484450, eISBN: 9781589484467.

Focus on Geodatabases in ArcGIS Pro is a detailed workbook that surveys the creation, editing, and sharing of ArcGIS geodatabases in ArcGIS Pro. David W. Allen has an established record with Esri Press: his previous publications include *Tutorial 2: Spatial Analysis Workbook* (2016), *GIS Tutorial for Python Scripting* (2014*), Getting to Know ArcGIS® ModelBuilder*™ (2011), and *GIS Tutorial 3: Advanced Workbook* (co-authored with Jeffrey M. Coffey, 2010). He brings considerable experience to his latest book, including 30 years of GIS work for the City of Euless, Texas, and 18 years as an adjunct professor at Tarrant County College in Fort Worth, Texas.[i]

The book has seven chapters. The first chapter emphasizes the need for initial planning of geodatabase models before using software, and introduces key geodatabase elements such as feature datasets, feature classes, fields, attribute domains and subtype categories. The chapter's exercises involve in-depth design of geodatabase schema on spreadsheets using paper and pen. As with subsequent chapters, design elements are considered as they pertain to a described project. In Chapter 2 we begin working with ArcGIS Pro, building a geodatabase based on previously discussed concepts. Exercises include establishing feature classes for point, line and polygon data types, setting spatial references, and assigning domain rules to ensure data integrity. Chapter 3 covers populating geodatabases, reviewing procedures for bringing in existing data to established geodatabases and feature class structures. Chapter 4 discusses extending data formats, including sharing data in ArcGIS Online and converting

2D data to 3D views. It provides instructions for hosting feature classes, web maps and 3D scenes in ArcGIS Online. Chapters 5 and 6 explain how to create new features, advanced editing using diverse tools, and the use of templates. The final chapter is on building and maintaining topologies within a geodatabase.

The book comes with an EVA code providing access to a 180-day trial of ArcGIS Desktop Pro software. Data sets for each chapter's exercises are available for download through ArcGIS Online and instructors' resources may be requested from Esri Press.[ii]

This book's strength is its sound pedagogical method and clarity. It's a deep dive into geodatabases in which all chapters have a similar organization: statements of learning objectives, an introduction to concepts, tutorial and "your turn" exercises, sections on "what to turn in" (assuming the work is being done for a course), study questions, and suggestions for other study topics. Software screen shots are clear and exercises are well structured and easy to follow. The progressive-learning exercise format, with each chapter including tutorials that walk you through all the steps in detail and follow-up exercises that require more independent work, helps to ensure students are not just "clicking" without taking in or understanding processes. Finally, it is worth noting that though there is a natural progression of information in the text, chapter instructions and exercises can stand alone and be used independently of other chapters, if desired. For example, Chapter 4 would complement curricula on ArcGIS Online training.

The shelf life of software-based workbooks is always a concern. Introductory information within the book indicates pre-publication testing was done in ArcGIS Pro 2.3. While still relevant, rapid versioning of ArcGIS Pro could become a problem for students trying exercises, if tools and graphic interfaces change. Hopefully, some form of online updates will be introduced to ensure exercises remain up to date thereby extending the useful life of this workbook.

Although there are other books on geodatabases, I'm not familiar with a similar workbook specifically written for ArcGIS Pro. Other training support does exist, notably a range of briefer online training opportunities as well as ArcGIS Pro web help. Whereas this book focuses on feature datasets and classes using point, polygon and linear data structures, additional material on managing raster mosaics within geodatabases and importing non-SHP formats such as CAD files would complement it. For example, Esri Academy's 3.5 hour online course "Getting Started with the Geodatabases" could serve as an initial overview to supplement this more detailed workbook.

Focus on Geodatabases in ArcGIS Pro is suitable for classroom use and self-learners and is recommended for academic libraries, education programs and GIS practitioners.

Barbara Znamirowski
Head, Maps, Data & Government Information Centre
Trent University Library
Peterborough, Ontario

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[i] Taken from Esri Press Author Bio (provided with text)
[ii] Non-US customers are advised that procedures for obtaining these materials may vary.

GIS for Science: Applying Mapping and Spatial Analytics

Martin Chandler
McGill University

Wright, Dawn and Harder, Christian (editors). ***GIS for Science: Applying Mapping and Spatial Analytics.*** Redlands, California: Esri Press, 2019. 252p. $39.99 US. ISBN 9781589485303.

GIS for Science offers a title that aptly describes the broad focus of this book. While the book offers different modes and methods of applying GIS in various scientific disciplines, these are presented more as a structure around which to highlight GIS as a tool, rather than methodologies for employing the tool in different situations. GIS is the cake, with science as the marzipan decoration.

The content of *GIS for Science* is a series of highlights, demonstrating how GIS is currently being used in various endeavours that fall under the pan-"science" moniker. This includes research in atmospheric conditions, oceanography, wildfires, and more. While a cynic might view this as merely a promotional text showcasing how Esri products are useful in research, the information within does offer a nice beginner's guide for incorporating geospatial thinking in scientific research. The presentation appears as something of a coffee-table book, however the ideas presented are interesting, and the examples could easily be used to spur new avenues for researchers to pursue.

To create the book, the editors engaged with many authors. Each chapter is written by a different individual or group of individuals, all from different working institutions. This includes researchers with USGS, Redlands University, the American Red Cross, the Audubon Society, and Esri's own employees. The work is, rather noticeably, United States-focused, either in the locations of research or in the work of U.S.-based researchers, occasionally with a partner or two.

As a research tool, *GIS for Science* cannot be highly rated. While it presents some interesting ideas of how researchers are using GIS, its presentation is more a showcase of some current projects. It could be of use to a researcher who is considering incorporating GIS into their work, or an educator looking for an easy showcase of the uses of GIS more broadly, however it is unlikely to draw one in for much more than a casual perusal.

The quality of the cartography and imagery overall is quite high, as would be expected in this sort of text. From historical Audubon Society paintings to current LiDAR imagery, the graphics are the true showcase of the book, perhaps to the detriment of the text. The content is interesting, but the layout intends to pull the eye to the graphical elements.

As a text for the library, this falls in line with the yearly Esri Map Book. It offers a fine showpiece of high-quality imagery to draw in the GIS-curious; it could also be a method of finding new projects for a GIS librarian to develop or suggest to their local researchers. It is not high academia, and will likely not leave a lasting impression beyond "nice". Nice does have its place, though.

Martin Chandler
Data Services Librarian
McGill University Library
Montreal, Quebec

ASSOCIATION OF CANADIAN MAP LIBRARIES AND ARCHIVES

BULLETIN

Regional News

Edited by Martin Chandler

British Columbia

University of Northern BC (UNBC) – Roger Wheate and Susie Wilson

Giant floor map of Indigenous Canada

We hosted the Canadian Geographic giant floor map of Indigenous Canada at UNBC in May 2019 in conjunction with the annual meeting of the Canadian Cartographic Association and annual convocation ceremony. The map author, Chris Brackley (in photo), 'As the Crow Flies Cartography', gave the keynote address which can be watched here: https://cca-acc.org/2019-cca-conference-keynote-presentation.html

The map design is also described in the 4-volume atlas that most map libraries should have: https://indigenouspeoplesatlasofcanada.ca/

Jack Challenger map

Even the giant floor map however would be dwarfed by the Challenger map of British Columbia completed in 1954 and exhibited in the BC Pavilion in Vancouver until 1997. This amazing 3D map handcut in plywood by Jack Challenger and his family, now sits in blocks in a warehouse until someone can provide a permanent home. All it needs is a 2000m^2 area and building maintenance costs - scale is 1:50,000 and measures ~ 45 x 45 metres. https://www.vancouverisawesome.com/history/challenger-map-1954-1932659

Alberta

University of Alberta – David Jones

The Edmonton Map Society held its Winter 2020 Meeting on March 11, 2020.

Our topic was: Alex McPhee's Province of Alberta: A new integrated wall map of Alberta.

Alex explained how project of personally traveling to every Alberta county sparked the desire to create the most detailed provincial reference map of all time.

Included are a great many features never before printed on a single map: every Hutterite colony, every abandoned railway right-of-way, every campground, every Indian reserve surrender, forest fire burn scars to 2019. Choice details and the map's historical background were explained, before a copy was unrolled on the table for public inspection. As a new 2nd Edition is currently underway and being prepared for publication, feedback was encouraged. After the presentation there was a lively discussion.

Alex McPhee is a final year student in the Geophysics (Specialization) program at the University of Alberta. The map won the Best in Design (Student) award at the 2019 NACIS conference in Tacoma. Alex may be contacted at: awmcphee@ualberta.ca

Québec

Université de Québec à Trois-Rivières - Catherine Leduc

Nous (en fait Annie Fréchette, ma collaboratrice) travaillons à la numérisation, en format vectoriel, d'index de photographies aériennes du MFFP. Nous avons plus de 12000 photographies aériennes pour lesquelles seules des images (.tif) des cartes-index sont disponibles : le repérage et l'utilisation de cette collection est donc très difficile, ce à quoi nous tentons de remédier.

Au fait, si quelqu'un a rencontré et résolu un problème de géoréférencement de cartes-index au format .tif qui ne s'alignent pas lors de la production de mosaïques : vos conseils sont les bienvenus.

We (in fact Annie Fréchette, my collaborator) are working on the digitization, in vector format, of indexes of MFFP aerial photographs. We have more than 12,000 aerial photographs for which only index-maps in image format (.tif) are available: locating and using this collection is therefore very difficult, which we are trying to remedy.

If anybody has faced and solved problems in georeferencing index-maps in .tif format that don't align when trying to produce mosaic: your advice is welcome

McGill University – Martin Chandler

After taking over responsibility for the Map Room, and thereby McGill University's Map Collection, I have secured support to begin a cataloguing project of our physical maps. While parts of this have been undertaken in the past by previous librarians, there is no current inventory of maps, and therefore no method for communicating to our users what we have available. The project will begin with series, from which we hope to expand to include individual maps. While we are only in the early days, already some interesting gems have been found, and we look forward to advancing this project over the summer months and into the coming years.

I have also started an inventory of the air photos in our collection, along with related indexes. Once complete, we will use the inventory to begin digitizing and georeferencing the index maps, georeferencing the air photos, and creating a usable index of our air photo collection for researchers.

ASSOCIATION OF CANADIAN MAP LIBRARIES AND ARCHIVES

BULLETIN

Geospatial Data and Software Reviews

Meg Miller
University of Manitoba

2019 Novel Coronavirus COVID-19 (2019-nCoV) Data Repository: *Johns Hopkins University Center for Systems Science and Engineering*

Introduction

The following will examine the ***2019 Novel Coronavirus COVID-19 (2019-nCoV) Data Repository*** compiled by the Johns Hopkins University Center for Systems Science and Engineering (JHU CSSE). This data is openly available to the public for educational and academic research purposes from JHU CSSE's GitHub (https://github.com/CSSEGISandData/COVID-19) and is the basis for the popular data dashboard tracking global cases of the Novel Coronavirus seen below in Figure 1.

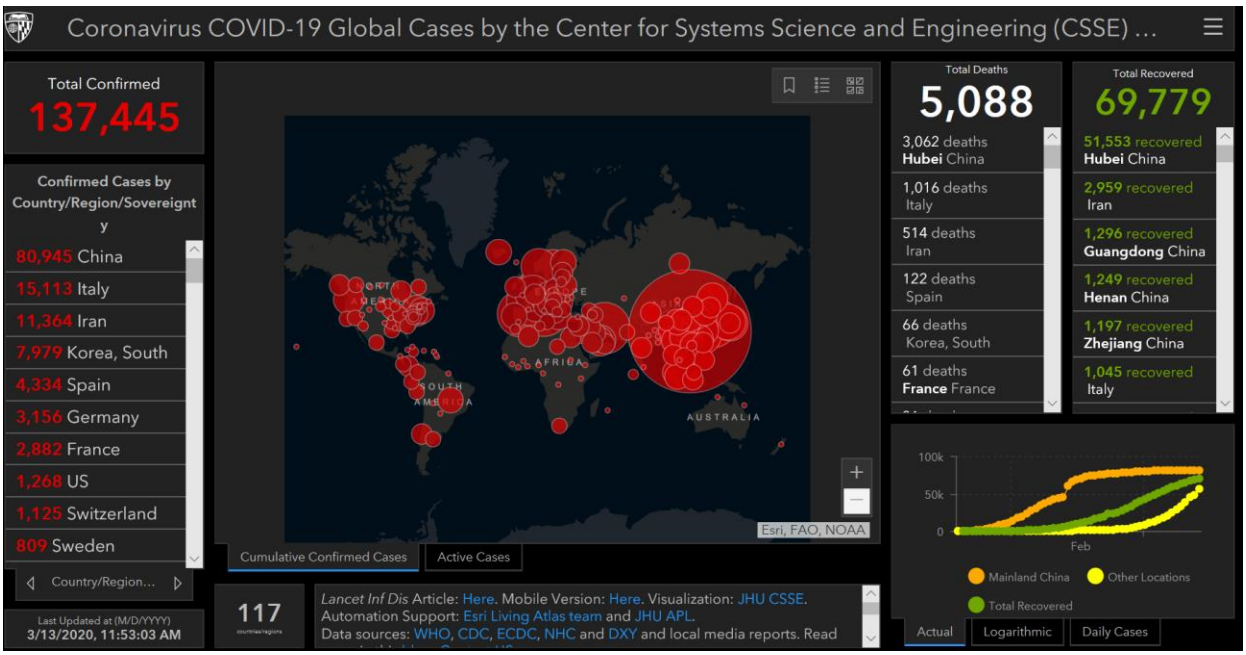

Figure 1: Johns Hopkins Coronavirus dashboard

Background

Dong, Du and Gardner summarized the history of this repository in their correspondence with The Lancet published online in February 2020. What started out as a manual data collection effort using

Google Sheets, became unsustainable as the pandemic unfolded and the team switched to a semi-automated method of data collection pulling from an aggregation platform (DXY) created by Chinese medical professionals, and manually supplementing and cross-checking with other open government resources from various countries. The repo is now accessible through GitHub (https://github.com/CSSEGISandData/COVID-19).

Data details

The repository is composed of three main folders of .csv files and supporting documentation:

- *archived_data*- contains older datasets which have inconsistencies in certain attributes such as time zone and update frequency
- *csse_covid_19_data*- contains two aggregate datasets created by Johns Hopkins with new files uploaded each day at 23:59 UTC. Attributes included are: Province/State/City/Other (Other delineates events such as the passengers coming from the Diamond Princess cruise ship), Country/Region, Last Update, Confirmed, Deaths, Recovered, Latitude, Longitude.
    - *csse_covid_19_daily_reports*- contains a report for each day with confirmed cases, deaths, and recovered numbers. Chinese and Canadian data is broken down at a provincial level (see figure 2 below), American data at a state level, all other data is at captured at a country level.

	A	B	C	D	E	F	G
1	UID	Province/State	Country/Region	Lat	Long	NumberConfirmed	
2	1	Anhui	Mainland China	31.82571	117.2264	830	
3	2	Beijing	Mainland China	40.18238	116.4142	337	
4	3	Chongqing	Mainland China	30.05718	107.874	468	
5	4	Fujian	Mainland China	26.07783	117.9895	261	
6	5	Gansu	Mainland China	36.0611	103.8343	83	
7	6	Guangdong	Mainland China	23.33841	113.422	1151	
8	7	Guangxi	Mainland China	23.82908	108.7881	210	
9	8	Guizhou	Mainland China	26.81536	106.8748	109	
10	9	Hainan	Mainland China	19.19673	109.7455	136	
11	10	Hebei	Mainland China	38.0428	114.5149	218	
12	11	Heilongjiang	Mainland China	47.862	127.7622	331	
13	12	Henan	Mainland China	33.88202	113.614	1073	
14	13	Hubei	Mainland China	30.97564	112.2707	29631	

Figure 2 Example of data from daily report dataset.

    - *csse_covid_19_time_series*- contains three reports (confirmed, deaths, recovery) with a new entry being added to each of these reports each day.

- *who_covid_19_situation_reports*- contains situational pdf reports and data created by the World Health Organization. Containing documentation discusses why the CSSE data is more accurate and current than that of the WHO.

Robust documentation is provided to users in plain language explaining field types, definitions and any ambiguity surrounding them (i.e.: what does confirmed mean from a reporting standpoint), data modification records and links to the visual dashboard as well as references to all of the primary data sources.

Users

At the University of Manitoba, the programs who have displayed the most interest in proactively seeking out this dataset are users from Health Science and Environmental Science. Both graduate and undergraduates have been interested in using it in their final projects where they can pick their own topics or as a dataset to teach themselves a visualization tool during the lab drop-in hours we run. The faculty who were looking to access the data were attempting this when the pandemic was in its early days before the data was posted to GitHub. They were looking for support in finding and cleaning it so that it could easily integrate into their teaching materials.

Library usage

Outside of discovery and access requests three themes of instruction have been offered using this dataset. All sessions were well attended by a cross-section of programs, skill levels and professional levels (students, faculty and staff). Duration ranged from 50-120mins.

- Data Integration
- Online Data Visualization Considerations/ Web Mapping
- Introduction to Software (QGIS, ArcGIS Online)

Data Integration is centered on the idea that in the real world a researcher would be combining a variety of data from different sources to support their own research data. In the session a report from the *csse_covid_19_daily_reports* dataset is selected to act as a stand-in for 'researcher data'. Using the GitHub pages we explore the documentation and discuss things such as field types, naming conventions, data modification, versioning and metadata. OpenRefine is used to do some basic data cleanup tasks. Changes that would need to be made to the file to join it to a country boundaries file in GIS software are also discussed. Moving forward this session could be team taught with the RDM Librarian or Digital Archivist.

The Web Mapping session acts as an introduction to data visualization considerations for the web, and has also been done as a brown bag at the Health Science Campus. Discussion is held around best practices in data visualization (colour, cognitive load, accessibility concerns etc.). In the second half of the session the *csse_covid_19_daily_reports* data is loaded into ArcGIS Online and used to create a map depicting confirmed cases for a colourblind user, participants chose what visualization methods they wish to use (proportional symbology, choropleth etc). A future session has been requested to do the same but using Leaflet.

The final way this dataset has been used in University of Manitoba Libraries is as the dataset in Introduction to Software 'X' sessions. So far it has been run using ArcGIS Online, and QGIS with a request for a version done in R. The differences in raster, vector and tabular datasets are explored

using Natural Earth Data and the *csse_covid_19_time_series* data for confirmed cases. The Coronavirus data is added as a table, and joined to the Natural Earth country boundary file. Selecting by attribute allows us to highlight all the cases that are associated with the Diamond Princess Cruise ship. The output is a choropleth map where we look at how different types of classification can impact the reader's perception of a situation as seen in Figure 3. Discussion is also had about importance of taking population into consideration when visualizing epidemiological data; and how easy it is to make accidental population distribution maps.

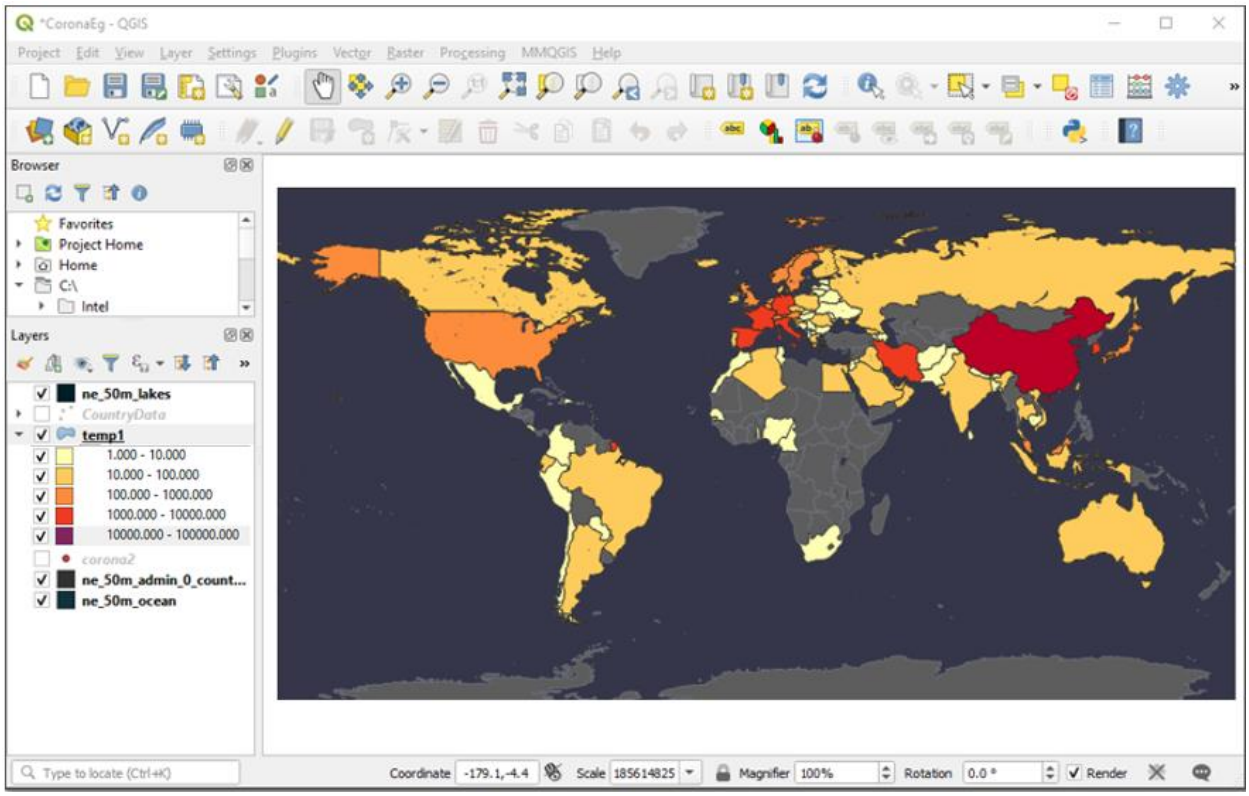

Figure 3: Mapping confirmed cases of coronavirus using QGIS

These sessions are the ones that get the most feedback about the usefulness of using a current dataset that users can engage with.

For the two software related workshops it was necessary to do some initial data cleanup to the files in terms of field names, removing unnecessary columns, and country name disambiguation. As time has gone on the creators have been working to get their data into a more easily usable state, so there is much more consistency (and all changes are documented).

Conclusion

The *2019 Novel Coronavirus COVID-19 (2019-nCoV) Data Repository* compiled by the Johns Hopkins University Center for Systems Science and Engineering (JHU CSSE) is of very high quality when it comes to aggregated open data sets. From its beginning as a Google/ Kaggle Sheet to the repo's current form in GitHub, the creators have evolved along with the public health issue

making use of a stable platform, clearly documenting their choices and changes in plain language, and working to make the dataset as clean and accurate as possible. All of these things make it a very useful tool for teaching in both theory and practical applications.

Note: For some context I am a single person offering support for Data Visualization services, my position is new so I had no learning materials to start with. A current event is something many people from different areas of campus can engage with. Hopefully by discussing the ways which

this dataset was made use of allows for an easier entry point in adopting a new resource.

Dong E, Du H, Gardner L. An interactive web-based dashboard to track COVID-19 in real time. *The Lancet Infectious Diseases*; published online Feb 19. https://doi.org/10.1016/S1473-3099(20)30120-1

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