

RAMSEY COUNTY
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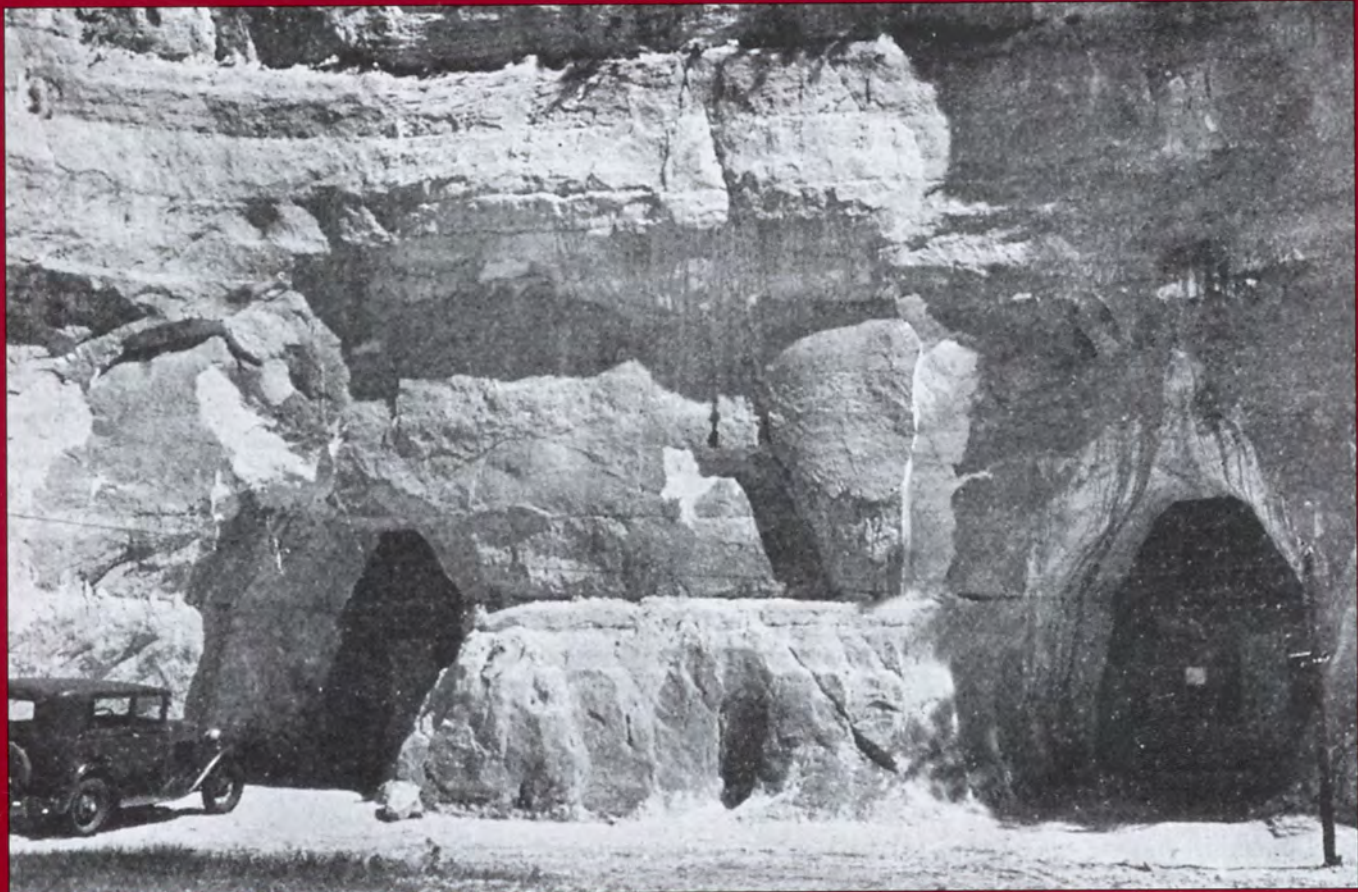
Alfred Adler and his 1937
Lecture at the St. Paul
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St. Paul Underground

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Caves like these in the Twin Cities bluffs along the Mississippi River were used for ripening the Roquefort-like cheese that almost caused an international incident with France. See article about Minnesota's Blue Cheese beginning on page 4. Photo from the National Butter and Cheese Journal, January 10, 1935.

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RAMSEY COUNTY History

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A Message from the Editorial Board

This issue of *Ramsey County History* opens with Greg Brick's absorbing examination of how and why agricultural researchers at the University of Minnesota produced a Roquefort-like blue cheese in the caves on St. Paul's West Side from the 1930s to the 1950s. Many local people know that in the days before modern refrigeration, St. Paul's pioneer brewers had taken advantage of the constant cool temperatures in the caves to store beer, and some people knew the caves had been used for raising mushrooms, but author Brick introduces us to the little-known world of blue cheese production in these caves.

Additional articles in this issue present Roger A. Ballou's account of a 1937 lecture by the famous psychologist Alfred Adler at the Women's City Club and Susan C. Dowd's research into the mysterious 1902 death of an unidentified, beautiful young woman near the railway station at Dayton's Bluff.

Fall is always a great time for apples. To honor this year's apple season, Ralph Thrane, the resident horticulturalist at the Society's Gibbs Museum in Falcon Heights, contributes a summary of his work in choosing and growing the Heritage apple varieties that have been planted at the Museum. This issue closes with author DeAnne Cherry adding another piece to our ongoing series, "Growing Up in St. Paul," with her recollections of her teenage years living on St. Paul's Avenue in the 1950s.

The Editorial Board of this magazine also wants its readers to be aware that Paul Nelson's article about St. Paul's smallpox epidemic of 1924 that appeared in the Summer issue has caught the eye of a present-day researcher at the Medical School of the University of Minnesota and is being used in conjunction with contemporary studies of this dread disease. Our thanks to Paul for his timely work that may, in a small way, contribute to the future betterment of all.

John M. Lindley, Chair, Editorial Board

St. Paul Underground

The University Farm Experimental Cave and How St. Paul Became the Blue Cheese Capital of the World

Greg A. Brick

The University of Minnesota has undertaken many ventures since it opened its doors in 1851, and at least one of them took place in the St. Paul Underground. From 1933 to the 1950s, the University rented sandstone caves on the West Side of St. Paul and produced a domestic Roquefort cheese—subsequently named “Minnesota Blue”—an event that would have international repercussions. St. Paul was acclaimed “the Blue Cheese Capital of the World” during World War II. This, describing the capital of a state which, because of its location with regard to the dairy markets, usually was better known for butter, than for cheese.¹

Many “foreign type” cheeses, as they were known, were manufactured in the United States at the time. Green County, Wisconsin, for example, was dubbed “the Swiss cheese capital of America.”² And it certainly wasn’t the first time that the University Farm—as the St. Paul Campus of the University of Minnesota was then called—had produced a foreign type cheese. As early as 1894, the University had developed domestic Edam and Gouda.³ World War I, which cut the United States off from imported French cheese, led the United States Department of Agriculture (USDA) to develop a cow’s-milk Roquefort cheese in artificial curing rooms at Grove City, Pennsylvania.⁴ “The French had been careful to write very little about the process, so somebody had to do the experiments,” one commentator noted.⁵

Professor Willes Barnes Combs (1892–1959), a native of Missouri, was appointed professor of Dairy Industry at the University of Minnesota in 1925. He soon discovered “a queer local fact. There are dozens of sandstone caves in St. Paul.”⁶ In the late 1920s, while shopping for mushrooms at a cave just off South Wabasha Street in St. Paul, he noticed that a lantern in the cave was covered with rust. The mushroom grower informed him that the atmosphere of the caves was extremely moist. Combs conjectured that the caves might have a combination of temperature and humidity similar to “the celebrated Roquefort

caves” of France, where Roquefort cheese is ripened.⁷

Mankind has been using caves to ripen cheese for millennia. The story of the Cyclops cave, where an early type of the popular Greek Feta was ripened, appears in Homer’s *Odyssey*.⁸ The Roquefort caves have a history dating back to Classical Antiquity. In the first century A.D., Pliny the Elder was said to have served this cheese to guests in his villa outside Rome. The blue, aristocratic veins running through the cheese were partly responsible for Roquefort being called *Le Roi des Fromages*—the King of Cheeses.⁹ Italy’s Gorgonzola and England’s Stilton are similar, blue-veined cheeses.

An almost comic version of the Roquefort story was published in the University student newspaper, the *Minnesota Daily*. It may have been influenced by the necessity for students to sometimes eat old sandwiches!

Centuries ago, under the Roman empire, a Gallic cheep-herder [*sic*] sought the shelter of one of the natural caves near Rocquefort in Aveyron while he consumed his midday meal of bread and cheese. Returning months later to the cave, the herder found the remnant of the cheese was marbled with mold and surprisingly pleasing to taste. Before long, cheeses by the hundreds were stored in the caves and dusted with bread crumbs to induce mold.¹⁰

“Prof. Combs now has found that Roquefort conditions are approximated

by the sandstone caves along the Mississippi in the Twin Cities area,” another newspaper reported.¹¹ St. Paul’s caves, according to Combs, were “the only caves in this country where temperature and humidity are similar to those in France.”¹² Artificial ripening chambers, or “mechanical caves,” as they sometimes were called, had been tried in the past, but they proved so costly to build and operate that they had not attained success on a commercial scale.¹³ “We can’t set up a room like this,” Combs explained.¹⁴ A crucial problem was to hold the temperature low while maintaining high humidity—an almost paradoxical combination.¹⁵

On May 17, 1933, having secured an appropriation of \$500 from the State of Minnesota to cover the cost of 5,000 pounds of milk and other necessities, Combs placed the first batch of cheese—“about 100 pounds”—in a small, rented cave. His associate in the work was Samuel T. Coulter, a University expert in butter-making. “In 1933,” Combs wrote, “when the Dairy Division of the University of Minnesota became actively interested in the manufacture of this cheese in so far as was known no blue cheese was being manufactured commercially in this country.”¹⁶

A Haywire First Batch

While Combs’s use of St. Paul’s caves was new, the cheese recipe was not, having been developed by the dairy scientist K. J. Matheson. It was referred to as “an old formula that had been gathering dust in the Department of Agriculture.”¹⁷ But Combs was using a special strain of the blue mold, *Penicillium roqueforti*, that had been selected by two researchers, Hammer and Lane, at Iowa State College, Ames, Iowa.¹⁸ “The first batch went haywire, probably because the cave had no door,” Combs said later.¹⁹



University of Minnesota Professor W. B. Combs, left, and R. A. Trogatten, state Commissioner of Agriculture, inspecting the University's "Roquefort" Cheese Caves in St. Paul in 1935. When the French Trade Commission objected strongly to the use of the term Roquefort, the cheese became known as Blue Cheese instead. Photograph from the Minnesota Historical Society.

In the fall of 1933, a federal grant was obtained, adding to the amount secured from the legislative appropriation. In the spring of 1934, Combs tried again, the mouth of the cave this time being sealed with "a tight wooden framework." He met with spectacular success, producing 10,000 pounds of "Roquefort-type cheese." On July 20, 1934, Walter C. Coffey, dean and director of the University's Department of Agriculture—for whom Coffey Hall later was named—wrote a letter to the United States Secretary of Agriculture, Henry Wallace, on behalf of his staff:

We are in the midst of a research project having to do with the manufacture of cheese

of the Roquefort type. Copying after certain manufacturers of this type of cheese in Europe, we are ripening these cheeses in caves. These caves are cut out of the salt sand-stone along the Mississippi River in the St. Paul vicinity. There are workers who make their livelihoods constructing these caves. I am told that they get the sand which is well adapted to moulding purposes as compensation. Therefore, the possibilities for cheese caves are almost unlimited.

We are presenting you with one of these cheeses. I would especially like to have you know that this product is sent to you with the compliments not only of myself but also of Professor Andrew Boss, Vice Director of Experiment Station, and Professor Willes B. Combs of our Dairy Division who is in

charge of the project. If convenient we should like to know how you and the family like this cheese. If it so happens that the Wallace family [has] a taste complex against this type of cheese, I hope you have some friends who can use it.

I think you will be interested in knowing the temperature and moisture conditions in the cave in which this cheese was ripened have remained almost constant since last January 1. I believe I am correct when I say that the temperature has remained between forty-five and fifty degrees Fahrenheit, and that moisture conditions have been almost at saturation point all the while.

If we succeed in making a uniform product of high quality, we think we shall be paving the way for a great cheese industry because of the availability of these caves.

A shorter letter with the same import, along with another cheese sample, was sent at the same time to "Brain Truster" Rexford A. Tugwell, Under Secretary of Agriculture.²⁰

Although the Government thus had been informed, the first big public announcement of the new cheese did not take place until the following year. "Million Yearly Cheese Trade Seen Here," crowed the *St. Paul Pioneer Press*, on January 6, 1935, reporting how "the dairy chief," Combs, "disclosed that nearly 10,000 pounds of Roquefort-type cheese, the flavor of which amazed epicures, was cured this year in a small, experimental cave, within a few minutes' walking distance from St. Paul's City Hall." The article continued, "The experimental batch was disposed of through three or four retail grocery stores here and at Rochester and Virginia, Minnesota."²¹

Huge Milk Surplus

The production of cheese, though valuable in itself, would neatly solve another problem that confronted the state during the Great Depression: "Absorption of a tremendous amount of Minnesota's present milk surplus." This would be a boon especially to "the Twin City milk area." It would be fairly simple to manufacture curd or "green" cheese in local creameries and transport it to St. Paul's caves for ripening.²²

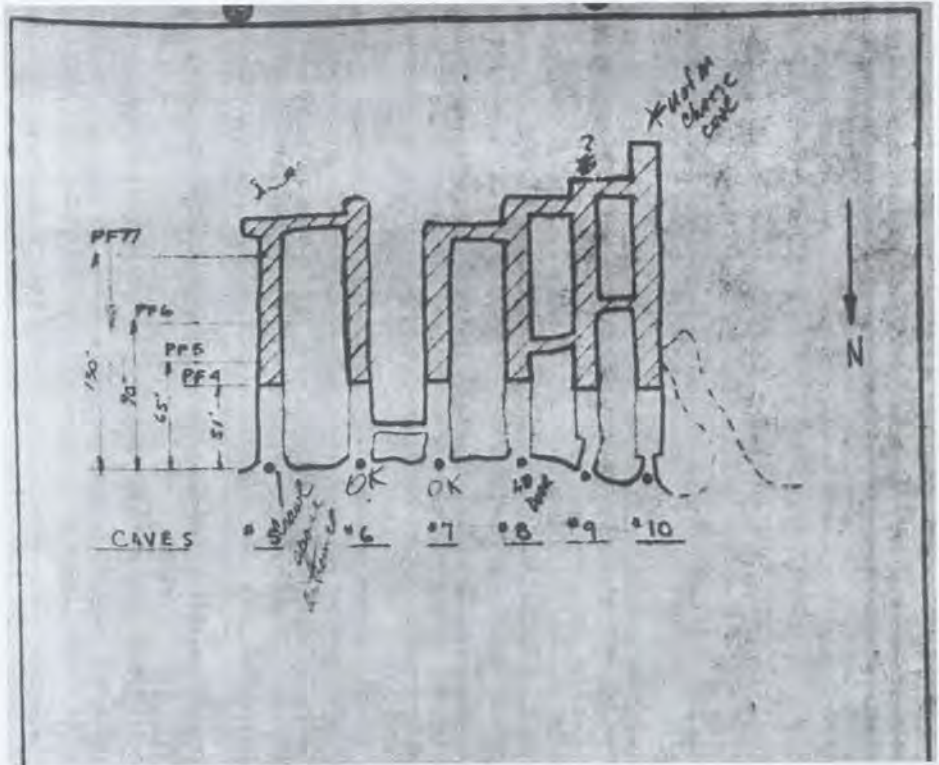
A simplified description of how

Combs made blue cheese follows. A bacterial starter was added to cow's milk, which was then curdled with rennet. The whey was poured off and the curd was milled and inoculated with mold powder. The mold concerned, *Penicillium roqueforti*, was grown on bread. The moldy bread was ground to powder and applied to the curd with an ordinary salt-shaker. The curd was then hooped, creating cheese wheels, and placed on drying racks. The cheese was transferred to the cave and salted. Air holes were punched in the cheese and the mold, growing in these holes, led to the distinctive veining pattern for which blue cheese is known. The cheese was ripened in the caves for three months, removed, wrapped in tin-foil, and placed in cold storage for six months, by which time it had developed "that heavenly stink which goes so well with cold beer." The conditions were rather exacting. "This cock-eyed cheese is very temperamental about its adolescence," wrote one reporter.²³

Combs scaled up his operations in the following year. "A larger cave of about the same cross section but over 200 feet deep was secured in 1935. This cave had been used for growing mushrooms, and when first observed had a rather musty odor. Approximately an inch of sand was scraped from all surfaces of the cave in order to present clean surfaces. The musty odor virtually disappeared and did not at any time contribute to the flavor of the cheese."²⁴

The caves used by the University were rented from the Villaume Box & Lumber Company, located at 76 Indiana Avenue West, along what is now Plato Boulevard. Villaume, a well-known St. Paul business, had been founded in 1882, and was "one of the nation's leaders in the manufacture of custom millwork, shipping cases and boxes," according to a 1940 promotional brochure.²⁵

The brochure continued: "Villaume has on its own property, 14 hillside caves with surface level entrances. Each cave has a ceiling height of 12 feet and is 20 feet wide. The 14 caves contain a total of 50,000 square feet of floor space, usable for manufacturing, storage, or as shelters in event of air raids."



A Civil Defense map of the Villaume caves dated 1962. The hand-written annotation identifies the "U of M" Cheese Cave," but by that time the caves no longer were used for ripening cheese. The map is courtesy of the St. Paul Public Works Department.

The "Bastard Caves"

Combs claimed that there were enough caves near St. Paul to supply the entire world demand for Roquefort.²⁶ "There's not a European cheese that can't be made right here in Minnesota," he boasted.²⁷ Talk like this did not go unnoticed for long. M. Henri Cassou, a member of the French Foreign Trade Commission, swooped down on "the bastard caves," declaring that "There is only one Roquefort cheese and it is made in France." "Genuine Roquefort cheese," Cassou informed the American, "is made from sheep's milk. This milk has other properties, because of the peculiar conditions of vegetation around Roquefort, France." The Minnesota product, by contrast, was made from the more plentiful cow's milk, which sometimes imparted a yellowish color to a cheese that was supposed to be white.²⁸ France had "an old agreement with the State Department which somehow restrains American cheese-makers from labeling their cheese with the dear old name that sends cheese fans off into the gentle dithers."²⁹

Combs gave Cassou a tour of the University cave. "Your product is very good," Cassou conceded, after tasting the cheese, "but I would suggest that it be called 'blue' cheese. Why fly under false colors?" Combs was obliged to "fall in line with the panty-waists, and just call it 'blue cheese'." It was eventually named "Minnesota Blue."³⁰ But Cassou had been the victim of a capital joke. Combs confessed years later that genuine French Roquefort had been planted among the Minnesota cheeses in the cave. Cassou hadn't even noticed.³¹

National Cheese Week, "which aims at putting into consumption the nation's cheese surplus," was designated as November 10 to 16, for 1935.³² This promotional event was inaugurated in Minnesota on November 12, 1935, when the state commissioner of agriculture, R. A. Trovatten, inspected "the University of Minnesota Roquefort cheese caves," hosted by Combs.³³ By the end of that week, it was reported that work had begun on a new cheese plant in Faribault, Minnesota. Roquefort-type cheese, in-

spired by Combs's experiments, was to be cured in caves formerly used by the Fleckenstein Brewing Company, on the banks of the Straight River, in Faribault. Thus originated the Treasure Cave brand, introduced in 1936, and going strong today. It was the first commercial venture stemming from Combs's research.³⁴

Having begun with such fanfare, Combs's Roquefort project unexpectedly dropped out of sight for the next few years. Apparently, even though use of the caves had lowered the price of Roquefort-type cheese, the domestic product still couldn't compete with the French import.³⁵ As one industry column advised a Wisconsin correspondent, "I have no doubt that you will be able to make some good Roquefort cheese and sell some of it locally as a novelty, but to find a reliable buyer who will take your entire output is difficult."³⁶ In 1936, Combs is reported as working on another mold-ripened cheese—Camembert.³⁷ On June 10, 1937, KSTP was scheduled to give a live radio broadcast from the University caves, during which Combs would be interviewed about Roquefort cheese.³⁸

The fall of France to invading German armies in June, 1940, however, cut off French imports decisively. Imports of all kinds of cheese dropped from 59 million to 32.6 million pounds.³⁹ "City's Mil-

lion-Dollar Cheese Industry Gets Off With Bang," trumpeted the *Pioneer Press* on December 15, 1940. In the autumn of 1940, the Kraft Cheese Company of Chicago rented "one big cave, 150 feet deep" from Villaume and its "K-men" began marketing the ROKA brand of blue cheese,⁴⁰ while the Land O'Lakes Company, its rival just down the bluff, rented "two caves, 100 feet deep," at the former Castle Royal nightclub, which had gone bankrupt in 1940. In January 1941, the first commercial blue cheese from St. Paul's caves hit the market. Estimated production figures for Minnesota blue cheese in 1941 were "between two and a half to three million pounds."⁴¹

Roquefort projects sprang up elsewhere in the United States. Some of them employed strange curing rooms, such as the abandoned coal mines of Pennsylvania—the origin of the PENROQUE brand.⁴²

Combs had triumphed. On February 27, 1941, thirty-six Minnesota legislators visited "the University Farm experimental cave" under Combs's wing, and were served blue "as well as some Trappist or Port de Salut-type brick cheese." The legislators went on to visit the Kraft and Land O'Lakes cheese caves, whose very existence owed everything to Combs's mastery of the "dairy arts." As if that

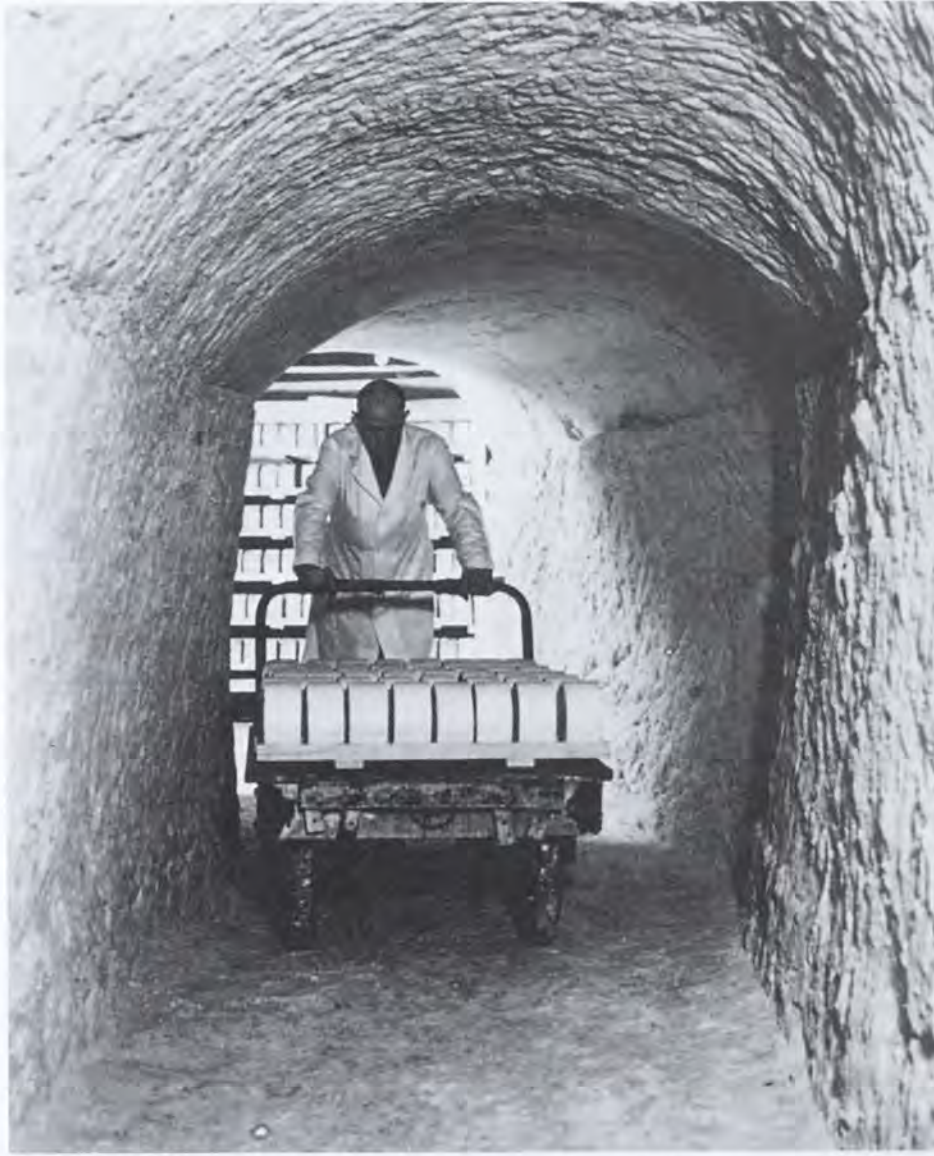


Mushroom Valley was the informal name for a stretch of the Mississippi River gorge near downtown St. Paul. It contained about fifty caves, most of which were devoted to mushroom growing. Other uses were, as detailed in this article, the ripening of blue cheese, and—as shown in this 1937 photo of Yoerg's Brewery Cave—the lagering of beer.

were not enough, Combs rolled out yet another cheese about this time, called Gopher.⁴³ In Chicago, people were said to prefer Minnesota blue cheese to real French Roquefort.⁴⁴ The University cave was featured on the food page of the *New*



The Kraft cheese cave with racks of ripening cheese wheels stretching off into the distance. Like the University cave, the Kraft cave was rented from the Villaume Box & Lumber Company. Photo from the Ramsey County Historical Society.



A cart of blue cheese being pushed through a cross-cut in the Kraft Caves.

York Times on June 18, 1942. One reporter declared that “St. Paul is well on its way to become the blue cheese capital of the world.”⁴⁵

Mail orders for blue cheese flooded into the University from all over the country. It was reported that “They had to hire three men at Christmas just to wrap the stuff.” In a dilemma familiar to every University researcher who develops a commercial process, Combs had to make a decision at this point, asking himself, “are we running a factory, or are we college professors?” Production at the University cave was scaled back.⁴⁶

Land O’Lakes, to meet the strong de-

mand, developed the CAVQURD brand of blue cheese. Because it was only semi-cured, the new cheese could be produced in less time, thus complementing the fully cured variety.⁴⁷ Combs, however, frowned on shortcuts like this, on the grounds that it did not produce as tasty a cheese.⁴⁸

By 1945, it was reported that the production of blue cheese ranked second only to cheddar in Minnesota.⁴⁹ But concern arose about what would happen to the fledgling blue cheese industry after the war.⁵⁰ Fortunately, these fears proved unfounded. In 1949, it was reported that “Imports [of Roquefort] have dropped

to practically nothing.”⁵¹ The “Land O’Lakes Cheese Cave” was listed at 6 West Channel Street in *Polk’s City Directory* until 1959. Blue Cheese is still made at Treasure Cave in Faribault, under the AMABLU label.⁵²

After World War II, blue cheese research at the University appears to have focused on packaging. In particular, there was a need to find a substitute for the traditional tinfoil. In a 1947 article describing Combs’s work, caves no longer seemed central to the research program: “Today, they still experiment with Blue Cheese, manufacturing a small amount every year in their Haecker Hall laboratory, some to be used for research, the rest sold at premium prices.” A photograph of the University cave used to illustrate this article actually dated back to 1935.⁵³

The last substantial work carried out in the University cave appears to have been that of Howard A. Morris, one of Combs’s students, who did graduate research there in the late 1940s. Morris’s master’s thesis, “The Relation of Surface Growth to the Ripening of Minnesota Blue Cheese,” was submitted in 1949. Morris concluded, among other things, that the control of surface growth of slime on blue cheese results in a product even more closely resembling Roquefort cheese.

The Cave in Ruins

The author recently interviewed Dr. Morris, now a retired emeritus professor in the Department of Food Science and Nutrition at the University of Minnesota. Morris, who recalls signing cave rental agreements with the Villaume Company, stated that sometime during the 1950s, the University cave ceased to be used altogether.

The University cave was surveyed, along with other St. Paul caves, as part of a Civil Defense study by TKDA, the well-known local consulting firm, in the early 1960s. A local caver recalls having seen a derelict sign pointing to the University cave in the late 1960s.⁵⁴

After the Villaume Company relocated in 1970, the abandoned University cave, along with others, suffered heavily. The author explored the cave on June 8, 2003, during the preparation of this article. The



The author (foreground) and Mark Holdridge exploring the former University Cave on June 8, 2003. Located near what is now Plato Boulevard and Ohio Street, the cave is filled to within a few feet of the ceiling with wooden beams and scrap iron pushed into it by a bulldozer. Photo by John McClellan.

cave's bluff entrance is sealed, but access was still possible through a "back door"—a cross-cut from an adjacent, open cave, which ran parallel. The cave is filled with debris, such as wooden beams and scrap iron pushed into it with bulldozers, to within a few feet of its ceiling. No obvious artifacts belonging to the cheese-making era were found.

With the development of less expensive ripening chambers that had more exact climatic control, most blue cheese production has migrated out of caves altogether—at least in the United States. The Treasure Cave website, for example, at www.treasurecavecheese.com, speaks of cave-ripened cheese almost as an oddity: "In 1936, when Treasure Cave first came into being in Faribault, blue cheese wheels were actually aged in caves. Today, the Treasure Cave brand is part of ConAgra Foods, Inc., and the cheese is aged in carefully controlled storage rooms near the Mississippi River in Nauvoo, Illinois."

A postscript to the story of Minnesota Blue is the development of Nuworld Cheese, introduced in 1953.⁵⁵ Back in

1926, geneticist Hermann Joseph Muller at the University of Texas discovered that X-rays induced mutations in the fruit fly. He was awarded the Nobel Prize in 1946.⁵⁶ In 1949, Stanley Knight, a University of Wisconsin bacteriologist, irradiated the blue cheese mold with ultraviolet light, creating a white mutant strain. Morris, Jezeski, and Combs seized upon this new cheese-producing organism, developing a "white blue" cheese which they named "Nuworld."⁵⁷ It was called "Nuworld" because unlike blue, and all other cheeses, it had no roots in Europe, having been developed in American university laboratories, and was uniquely a product of the New World. It was referred to as a "space age" cheese,⁵⁸ and the first new cheese in more than 500 years.⁵⁹ Also unlike Minnesota Blue, it was given its first consumer test at Toledo, Ohio, rather than locally.⁶⁰

Although St. Paul is no longer a blue cheese leader, the University of Minnesota, even to this day, produces small quantities for sale. And the old dispute between France and the United States lives on. During the American invasion of Iraq

in 2003, the French were penalized for their opposition to the war by a high tariff on Roquefort cheese. *C'est la guerre.*⁶¹

Acknowledgements

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Greg A. Brick is a professor of geology at Normandale Community College in Bloomington, Minnesota. He has been writing the "St. Paul Underground" series for Ramsey County History since 1995. He also writes a monthly cave history column for the Minnesota Speleological Survey, and was recently chosen editor of the Journal of Spelean History. His first book, Iowa Underground, A Guide to the Caves, Mines, and Tunnels of the Hawkeye State, will be published by Trails Media Group in 2004.

Notes

1. "Owing to the quality of her flour and butter, she [Minnesota] is richly entitled to the name she is known by, viz., the Bread and Butter state." J. J. Farrell, "The Growth of Minnesota's Dairy Industry," *Western Magazine*, January 1916, p. 118-121. For the story of the westward march of cheese manufacture, see Loyal Durand, Jr., "The Migration of Cheese Manufacture in the United States," *Annals of the Association of American Geographers* 42 (December 1952), 263-282.
2. "Wisconsin Leads in Production of Foreign Type Cheese," *National Butter & Cheese Journal*, January 10, 1935, p. 7.
3. "The University of Minnesota's Dairy Division," *National Butter & Cheese Journal*, January 25, 1937, pp. 7, 8.
4. K. J. Matheson. "Manufacture of Cows'-Milk Roquefort Cheese," *USDA Bulletin No. 970*, Washington, DC, 1921.
5. Sigrid Arne, "Call It 'Blue' Cheese," *St. Paul Dispatch*, September 13, 1942.
6. *Ibid.*
7. "Red Rust on Lantern May Give State New Industry," *Minneapolis Journal*, January 6, 1935.
8. Nancy Eekhof-Stork, *The World Atlas of Cheese* (New York & London: Paddington Press Ltd, 1976), 8.

9. Allen Chellas, "King of Cheeses," *Holiday* 3 (February 1948), 84-87, 127.

10. "Roquefort Cheese Made in Caves Along River Bank," *Minnesota Daily*, undated clipping, Willes Barnes Combes Papers, University Archives. For the standard account see Henri Pourrat, *The Roquefort Adventure*, Societe Anonyme des Caves et des Producteurs Reunis de Roquefort, 1956.

11. "Roquefort Cheese Cured in Dank Caves on Mississippi River," unidentified clipping, University Archives.

12. Charles R. Moore, "Million Yearly Cheese Trade Seen Here," *St. Paul Pioneer Press*, Jan 6, 1935.

13. "Twin City Caves Ripen Roquefort-Like Cheese," *Morris Tribune*, January 18, 1935.

14. "River Caves Aid Producers—State on Road to Cheese Fame," *St. Paul Pioneer Press*, February 2, 1941.

15. Matheson, *op cit.*, p. 18.

16. "The Manufacture of Blue Cheese," by W. B. Combs, undated typescript, provided to the author by Dr. Howard A. Morris.

17. Arne, *op cit.*

18. "Roquefort Cheese, Faribault's New Industry," unidentified clipping, WBCP.

19. Moore, *op cit.*

20. Copies of these letters were provided to the author by Dr. Morris.

21. See also, "Good Roquefort Type Cheese Being Made by Minnesota University," *National Butter & Cheese Journal*, January 10, 1935, pp. 8, 10.

22. "Dank Caves."

23. Arne, *op cit.* The most authoritative blue cheese recipe is given by Morris in *The Relation of Surface Growth to the Ripening of Blue Cheese*, 1949. See also F. J. Babel, "The Role of Fungi in Cheese Ripening," *Economic Botany* 7(1): 27-42 (Jan-Mar 1953).

24. Combs, *op cit.*

25. *The Villaume: office and plant strategically located on main water, rail, and air routes*. St. Paul, MN: The Company, 1940.

26. "The Cheese Makers' Art," February 15, 1935, unidentified clipping, WBCP.

27. "River Caves."

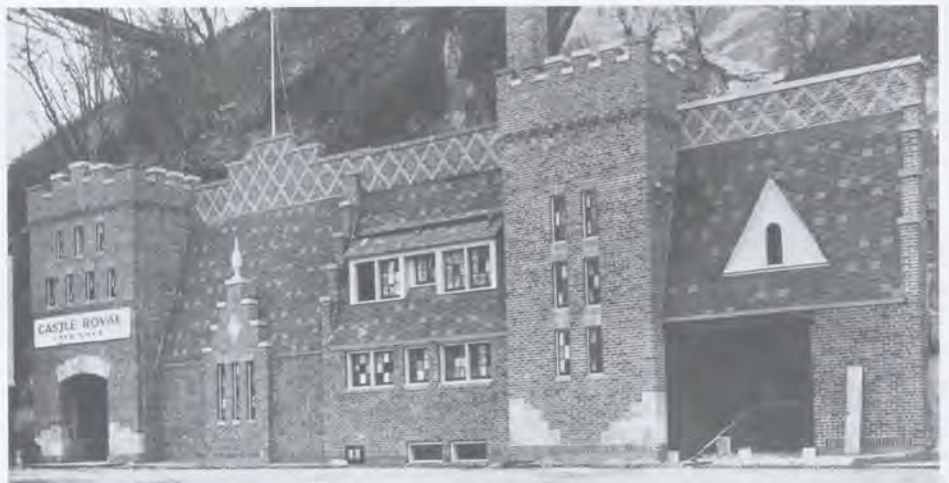
28. "Only One Roquefort, Frenchman Asserts After Testing Cave Cheese," *St. Paul Pioneer Press*, May 5, 1935. The yellowness, due to fat content, was often bleached out with benzoyl peroxide.

29. Arne, *op cit.*

30. Robert W. Carlson, "Minnesota Blue," *Minneapolis Star Journal*, January 4, 1941.

31. Arne, *op cit.*

32. "November 10 to 16 Designated as National



The Castle Royal nightclub, constructed in a sandstone cave, was the reputed lair of gangsters in the 1930s. From 1940, when the nightclub closed, until 1959, it was the Land O'Lakes Cheese Cave.

Cheese Week," *National Butter & Cheese Journal*, October 25, 1935, p. 6.

33. "Inspect Cheese in Caves," *Minneapolis Tribune*, November 13, 1935.

34. "Work Begun on Cheese Factory," *Faribault Daily News*, November 19, 1935, and "Faribault's New Industry." The Rice County Historical Society has a collection of photographs of the Treasure Cave operation.

35. "City's Million-Dollar Cheese Industry Gets Off With Bang," *St. Paul Pioneer Press* December 15, 1940; and "Cave Cheese Now Ready For Market," *Modern Dairyman*, January 1941.

36. J. L. Sammis, "Questions and Answers on Cheesemaking," *National Butter & Cheese Journal*, July 25, 1935, p. 22.

37. "U. Cheesemakers Seek to Develop Own Camembert," *Minneapolis Journal*, May 6, 1936.

38. "KSTP to Tell Story of Roquefort Cheese," *Minneapolis Journal*, June 6, 1937.

39. H. G. Lindquist, "What About Foreign Type Cheese?" *National Butter & Cheese Journal*, May 1941, p. 16-18.

40. "American Made Foreign Types Offer K-Men Broad Opportunities for Sales," *Cheesekraft* 21 (August/September 1941), pp. 4, 13.

41. Lindquist, *op cit.*, p. 17.

42. *Ibid.*, p. 17.

43. "River Caves."

44. "Yum! Yum! State Solons Agree—Cheese Caves Held Nation's Best," *St. Paul Pioneer Press*, February 28, 1941.

45. "Post-War Blue Cheese Center Seen in St. Paul," unidentified clipping, WBCP.

46. Arne, *op cit.*

47. "Land O'Lakes Will Be Finest Blue Cheese

Distributed," *Land O'Lakes News*, June 1941, pp. 5, 7.

48. "Post-War."

49. W. B. Combs and S. T. Coulter, "Keep Your Eye on New Dairy Products," *Minnesota Farm and Home Science*, October 15, 1945, p. 1.

50. Howard McCoy, "We Can Make It Here," *Country Gentleman*, February 1941, pp. 8, 60.

51. Morris, *op cit.*, p. 1.

52. "Travel-Gram," undated pamphlet published by Treasure Cave Blue Cheese, Faribault, MN.

53. "Minnesota Blue: Domestic Cheese Variety Developed by University Staff," *The Minnesotan* 1 (December 1947), pp. 8-9.

54. Greg Brick, "The University of Minnesota Cheese Caves," *Minnesota Speleology Monthly*, vol. 35, no. 2 (February 2003), pp. 13, 16-18.

55. "A New Cheese," *Minnesota Farm & Home Science*, May 1953, pp. 2-15.

56. Charlotte Auerbach, "Obituary Note, H. J. Muller 1890-1967," *Mutation Research* 5 (1968), 201-207.

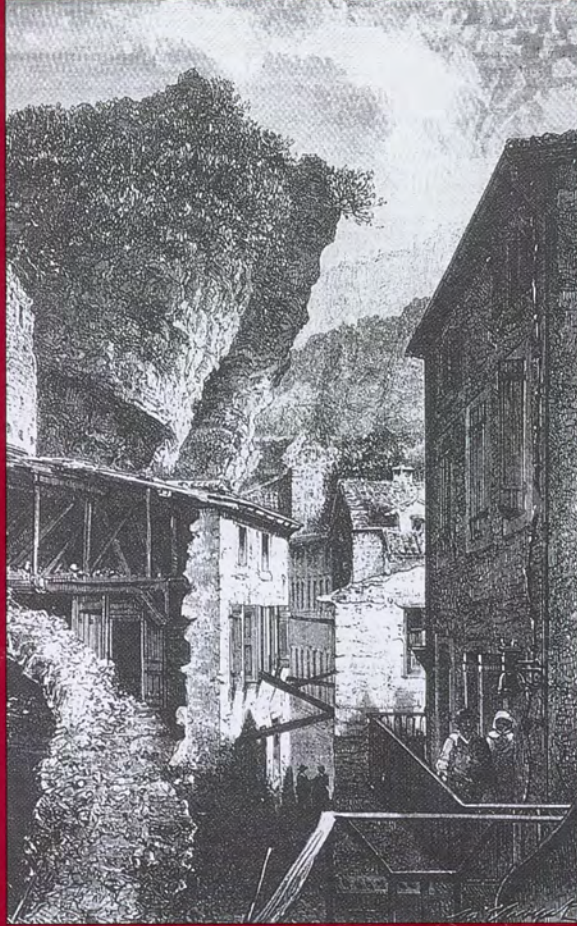
57. Axel Hansen, "New Cheese to Go on Sale This Summer," *Minneapolis Tribune*, May 10, 1953. Morris, Jezeski, & Combs, "The Use of White Mutants of *Penicillium Roqueforti* in Cheese Making," *Journal of Dairy Science* 37 (1954), 711-716.

58. *Eedhof-Stork, op cit.*, p. 152.

59. "U Develops New 'Blue' Cheese," *Minnesota Daily*, May 27, 1955.

60. "Ohio City Tests New-Type Cheese Developed at 'U'," *Minneapolis Tribune*, October 23, 1953.

61. John Tagliabue, "The State of Roquefort Sales to United States? It Stinks," *Minneapolis Star-Tribune*, April 6, 2003.



The celebrated Roquefort caves of France where Roquefort cheese has been ripened since antiquity. Development of a Roquefort-like cheese in the 1930s at the University of Minnesota's St. Paul campus, almost caused an international incident with France. See article about Minnesota's Blue Cheese beginning on page 4.

R.C.H.S.
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