

Sandstone & Tile

WINTER 2006 STANFORD HISTORICAL SOCIETY VOLUME 30, NUMBER 1



Palo Alto, Stanford, and the 1906 Earthquake

“Forget the Earthquake— This Is Palo Alto’s Opportunity”

Palo Alto, Stanford, and the 1906 Earthquake

THOMAS WYMAN AND ROXANNE L. NILAN

Gertrude and I were rudely awakened by the shaking of the house and the accompanying rumble, roar and crash. ‘What is it?’ said she. ‘It’s an earthquake—and it’s a bad one,’ I replied. ‘What shall we do?’ ‘Stay right here. This little house will last as long as anything.’ I knew the sturdy construction of our bungalow...but in my heart I felt that nothing could survive such a vicious shaking—that this was the end for us. It was like a terrier shaking a rat.¹

— GUIDO MARX
STANFORD PROFESSOR OF
MACHINE ENGINEERING

Guido and Gertrude Marx were among numerous Stanford faculty families living in Palo Alto in April 1906. The town, like many throughout Santa Clara Valley, suffered major damage from “the San Francisco Earthquake,” which shook the state from Mendocino to San Benito counties. Much has been written about the loss of two lives and shocking damage on the Stanford campus, which totaled as much as



STANFORD UNIVERSITY ARCHIVES

The earthquake wrecked Memorial Church, destroying its spire and crumbling its Italian mosaics.

\$3 million. Headlines across the country spoke of Stanford’s destruction, when they were not providing lurid details of the disaster in the city. Comparatively little, however, has been written about how the nearly 2,000 residents of Palo Alto, including many Stanford faculty, fared during the 1906 earthquake and how Stanford and Palo Alto residents worked together in the weeks after the fateful Wednesday morning of April 18th.²



The university's entrance gates at Palm Drive and El Camino Real collapsed into piles of rubble.

SCALE OF DESTRUCTION

After first checking on the safety of his family, Professor Marx took stock of his well-built wooden bungalow located at 356 Lincoln Avenue. “Our four brick chimney tops were down, as if sliced off at the roof,” he recalled. “Our kitchen sink, shaken from the blocks it stood on, had the water connection broken and a stream was pouring out on the floor.” Pictures had fallen from the walls, and marks on the soft redwood paneling revealed how wildly they had swung. Even so, Marx noted, “looking outside, all seemed peaceful in the spring dawn.”³ Only gradually did he and his neighbors understand “the extent of the blow” to both Stanford and Palo Alto.

Another town resident, Professor of Medieval History Arley B. Show, left on his bicycle to inquire of friends and neighbors on his way to campus. “When I set out from home,” he remembered, “I had no conception of the magnitude of the calamity. I was able to believe it only as the awful evidence came before my eyes...Very few had any previous standards by which to gauge the event.” Riding along Waverley Street, he noticed one man already at work clearing away debris from his fallen chimney. Hours later, after viewing damage on University Avenue and campus, Show found the man still absorbed with the same job, unaware of the extent of destruction no more than a mile away.⁴

Determined to get to his 8:15 a.m. mechanical engineering lecture, Professor Marx was annoyed that his usual morning bus was nowhere in sight, so he began walking, his leg in a cast from a recent baseball injury. “I started downtown on my crutches to find a bus.

In the business section,” he added, “I got a shock. A number of stores had their outer walls down and stood there, open faced like dollhouses.”

Finally arriving in the Quad, Marx found students and faculty “milling up and down, more or less like disturbed cattle, waiting for orders what to do.” Show similarly found students, faculty, and visitors moving “as one looks upon the dead. Clouds of dust shimmering in the morning light deepened the air of unreality.”⁵

Professor William James, visiting from Harvard that spring, was among those wandering about. He was particularly impressed, he told Marx, by the cheerfulness of the students. Marx noted, however, that it was simply due to the fact that “no one at first was able to take in the magnitude of the disaster.” Show went several times to the campus to get news and to wander among “the appalling ruins. ...We were all in a mood of expectancy and apprehension. It was not precisely fear. ...It was rather the half-hearted curious, half-fearful uncertainty which does not know what will come next but anticipates something new and strange...many people showed an element of philosophical wisdom...Most of the people were cheerful and patient in the face of the situation.”⁶

President David Starr Jordan dismissed classes for the day and urged students to help professors

clean up. This announcement, however, was quickly followed by an order closing down all university buildings until they were officially examined. And the first day of “aimless wandering about,” as Marx put it, was not really as aimless as it looked. “We were all taking stock,” Marx wrote a few months later. “Probably the very first measure taken by Stanford and Palo Alto people to do something,” Show recalled, “was the rescue work at Encina Hall and the Power House—the recovery of bodies of the injured and the dead. The sudden injection of the tragic element into the situation and the instant opportunity to help aroused everybody from his stupor; and from that moment things moved.”⁷

THE DAMAGE IN PALO ALTO

In Palo Alto residential neighborhoods, families like the Marxes and Shows established outdoor camps and means of cooking. “Everybody chose that night to sleep under the open sky,” Show remembered.⁸ Palo Alto’s first city librarian, Anne Hadden—a former assistant librarian at Stanford—recalled nights following the earthquake: “From our mattresses out on the front lawn, we could see the glare of the [San Francisco] fire in the sky, and there was trouble at night in the Public Library with some hoodlum refugees from San Francisco.”⁹

The initial reports from across Santa Clara Valley were bleak. “Many buildings are down in the towns of Santa Clara, Palo Alto, Mountain View, Gilroy and Hollister,” reported a special April 18 newspaper edition, jointly published by San Jose’s two major papers, the *Mercury* and the *Herald*. “Every locality in Santa Clara County has its finest buildings destroyed, and at least half the structures are irreparably damaged. Every farm house, every residence, inside and out of the cities and towns, wherever located, suffered more or less by the earthquake.”¹⁰ Special editions of the *Palo Alto Times*

*“No one at first
was able to take
in the magnitude
of the disaster”*

and the *Daily Palo Alto* (predecessor of the *Stanford Daily*) attempted to keep residents informed both on campus and off, sharing information with other local town papers as their reporters visited communities to the north and south.¹¹

Palo Alto physician and Stanford alumna Dr. Clelia D. Mosher surveyed the damage when she returned home from a visit to Carmel. In her report on damage to Palo Alto's business district, she described the Fuller Building, where debris fell into a vacant lot next door, and how the walls of the Simpkins Building, a three-story frame structure faced with brick, fell out onto the little harness shop next door. People sleeping in rooms above Frazier's Store, she reported, woke to find walls collapsed into the street, but the building itself stood firm.

Crandall's

bike shop was demolished by falling bricks from Fraternal Hall next door. Interestingly, while all the plate glass

windows along the south side of University Avenue were unharmed, she reported that all those on the opposite side of the street were broken.

"Just beyond the round of the Circle, on Alma Street, a few blocks down from my office, Mr. Thiele had recently completed a \$30,000 building of concrete blocks—the same material used in the Fuller building," Mosher noted. "Both of these buildings collapsed and were in plain view of the railway track. With the ruined [university] entrance gate to the Arboretum on the other [side], it is small wonder that people passing through on trains immediately after the earthquake should have reported Palo Alto as one of the towns very badly injured." Only three buildings

had actually collapsed, however, she pointed out—these two and Lirio Hall, "a flimsily constructed frame building dating from the early days of Palo Alto" on the creek side of University Avenue. Once used as a boarding house and later as a boarding school, Lirio Hall was unoccupied at the time of the earthquake.¹²

Across the county, towns took stock of the damage, largely to brick walls and chimneys, stone structures, and towers. An estimated 95 percent of San Jose's chimneys were down; at Los Gatos and Mountain View, the estimate was more than 70 percent, while at Palo Alto, only 40 percent.¹³ To the south, San Jose's schools were badly damaged. Its high school, only eight years old, was destroyed, and three public schools were unusable. Schools there were closed for 30 days. Palo Alto schools, however, escaped with comparatively little damage. Repair to cracked plaster and tumbled chimneys cost the district an estimated \$2,000, but inspectors quickly declared the buildings "firm and in plumb" and city schools reopened on April 23.¹⁴ Palo Alto's year-and-a-half-old Carnegie Library, with its heavy beam construction and tile roof, also survived the quake with relatively little damage.

Domestic water supply—which depended largely on wells, wind-mill pumps, and elevated water tanks—was an issue throughout the county. Santa Clara's four city water tanks collapsed, sending 180,000 gallons of water into a business district that was already reeling from the loss of the Pacific Manufacturing Company, a major employer. Nearly every other town on the Peninsula had limited water supplies for several days. Many of the tanks on the Stanford campus were down, and those that were still standing had lost much of their contents.¹⁵

Palo Alto's municipally owned water system, however, fared exceptionally well, with only a brief interruption of service. Conceptualized by Stanford engineers Charles David Marx (who lived on

"In Palo Alto, only three buildings actually collapsed"

For several days after the earthquake, many Palo Alto and Stanford residents cooked and camped outdoors.

Kingsley) and Charles Wing (who lived on Lincoln), the 60-foot scaffolding that supported the great tanks had swayed but remained sound. The large engine was briefly put out of full commission when its steam pipes broke but continued to give partial service sufficient for both domestic water use and light for residential neighborhoods. Indeed, Palo Alto's municipal electrical system brought light to Palo Alto while the rest of the Peninsula was in darkness.¹⁶

Palo Alto, like Stanford, had a hero in a fast-thinking employee: "The presence of mind of Robt. McGlinn, night engineer," reported the *Palo Alto Times*, "probably saved the city many disastrous fires from broken electrical wires. He stayed in the plant long enough to throw the switches and shut off the current before retreating out of the danger zone of the swaying tanks." McGlinn, unlike Stanford's Otto Gerdes, on duty at the campus powerhouse, survived the quake.¹⁷

In addition to losing water and power, many other Santa Clara valley towns lost the use of their sewer systems as a result of breaks and displacements in sewer lines. In Palo Alto, a number of breaks in laterals serving individual homes were reported, but these were quickly repaired. And although numerous bridges in the county were damaged, Palo Alto's railroad bridge across San Francisquito Creek was sound, as were bridges at Bryant and Middlefield.

WORRIES, RUMORS AND REFUGEES

Local housewives usually shopped in Palo Alto and Mayfield, so damage to buildings and interruptions in deliveries threatened the comfort of campus and Palo Alto families. "We walked over to Palo Alto this morning and stood in queue to take our turn in buying groceries," William James's wife,



Alice, wrote home to New England the day after the quake. "No eggs and no butter, but I got bread, and luckily I had laid in an extra stock of provisions Tuesday. ... You have no idea how remote and long ago Tuesday seems. I cleared our sitting room this morning and keep busy with our three meals. We had three guests to breakfast for we have an oil stove and other folk who use stoves [or] chimneys have no means of cooking."¹⁸

Only one grocery store in Palo Alto—located in the Mariposa Building—raised its prices, according to Mosher. She told this story:

A photographer arrived and asked if he could take a picture of the front of the store, with the proprietors—they were flattered to do so. He then informed them, 'You are the only firm in Palo Alto who has raised the price of groceries, in view of the food famine which is threatened. This picture will be widely circulated in San Francisco, across the state of California, and in the east, accompanied by the statement of this interesting fact!' Their prices promptly fell to the pre-earthquake level, and stayed there.

To the south, the county sheriff was visiting restaurants in San Jose that were accused of overcharging. "No famine prices are to be tolerated," announced the *San Jose Herald*.²¹



Timbers brace quake-damaged buildings at University Avenue and Emerson Street in Palo Alto.

In the aftermath of the quake, local residents were also hit with the problem of cash flow. “What is bothering us is a scarcity of cash,” worried Stanford’s Academic Secretary George A. Clark a week and a half after the earthquake. “Three dollars and fifty cents, I believe, is the extent of our cash, and all the banks are closed, the Governor declaring legal holidays from day to day to help them out. But then even this is not worrying us, or at least ought not to.”²⁰

News from San Jose told of buildings collapsed, deaths, martial law, and fires soon under control. But until Friday, no trains—and little news—had gotten through from San Francisco. “We were all intensely alive to the situation in the City,” Show recalled, “but we knew very little about it” since telegraph wires were down. “Dreadful rumors floated down the line and kept us keyed to the breaking point; but there was nothing tangible and authentic in them. And so we did what we must and waited.”²¹

Wild rumors spread up and down the state—Santa Cruz had been inundated by a tidal wave, California was devastated from Eureka to San Diego, brigands from San Francisco were on their way south to loot, and the insane from the Agnews

Asylum in nearby Santa Clara were running amock throughout the county.²²

The Agnews rumor had real tragedy at its heart. “On Wednesday we heard rumors of loss of life there, but we were more concerned with the report that many of the violent patients had escaped and were roaming the country,” wrote Payson Treat, a research associate who had just received his Stanford Ph.D. “Some of our students went down there to assist in rescue work. They brought back almost incredible tales.” Home to nearly 1,100 patients, the asylum suffered major damage to its 12 buildings, including its brick, four-story main structure. The dead included 101 patients and 11 staff; many were seriously injured, and hundreds needed specialized care and new homes. Treat and Entomology Professor Vernon Kellogg took 13 Stanford students down to Santa Clara to help the deputies and many volunteers from Santa Clara University and local hospitals. “As soon as we saw the buildings we realized what a catastrophe we had escaped at Stanford. ...The place must have been a veritable hell with the shrieks of the insane, the cries of the wounded and dying, the wild rush of everyone for safety.”

By the time Kellogg and Treat arrived, however, “the patients were camped on the lawns before the wrecked buildings. One hundred of the worst cases had been shipped to the Stockton asylum. All the living had been taken from the ruins... We at Stanford have been wonderfully fortunate. The dormitories and dwelling houses stood up very well, and no fire broke out to complete the work of the trembler.” Rescue efforts at Agnews continued for days.²³

Many people were also streaming southward from the city. “On our way to and from Agnews we passed many refugees from San Francisco,” Treat recalled.

*Most of them were in autos. Men and women with bundles or bags probably containing all their personal belongings, fleeing to some friends in the country. Then there were poorer people with a few household effects in wagons. We passed a procession of four wagons belonging to a dyer on Grant Avenue. They were loaded with belongings. The owner was mighty lucky to bring away as much as that.*²⁴

Alice James was struck by the number of needy people the day after the quake. She found that “the constant coming of people to the porch yesterday and the need of giving some of them food kept me from writing.” Although she and her husband, William, looked forward to getting back to Harvard, “we seem to help the people here and can’t turn our back on them just yet even if we could get tickets on the trains...”²⁵

That same day, Professor Show went to a meeting at the railroad depot, attended by some 20 or 30 people, to make plans for relief work. The meeting set in motion one of the most successful relief efforts in the Bay Area. Seven men were chosen to head Palo Alto Relief subcommittees, including Show, Guido Marx and Assistant Registrar John E. McDowell, ’00. They were joined by many Stanford faculty members, hundreds of Stanford

students and alumni and numerous other residents of campus and Palo Alto.²⁶

The Palo Alto Relief Committee found a way to help more than 5,000 refugees, serving 250 to 300 meals a day for several weeks and finding accommodation for more than 500. The joint work of the Palo Alto–Stanford relief effort, including hundreds of student volunteers, was so successful, moreover, that authorities in San Francisco—where

Wild rumors spread up and down the state—Santa Cruz had been inundated by a tidal wave, California was devastated from Eureka to San Diego

the truly needy remained—assigned it responsibility for a large portion of the Mission District. Dr. Mosher noted proudly that Katharine Felton (Cal ’95), director of San Francisco’s Associated Charities and “a Berkeley woman

not in sympathy with Stanford,” stated that Palo Alto had “rendered the most efficient help of any town outside of San Francisco.”²⁷ (See “A Prompt Grasp of the Situation,” page 17.)

Relations between the Relief Committee and Stanford authorities, however, were not always smooth. When “refugees were pouring down the ‘county road’ [El Camino]... and campsites had to be provided,” Marx recalled, “we received permission from Stanford authorities to use the field adjacent to the railway station, later the site of the first Community House.” A dustup ensued, however, between University Treasurer Charles Lathrop and Relief Committee members who were operating

the camp when horses—set loose from refugee wagons—headed into a nearby field, “creating havoc with a growing grain crop.” Lathrop ordered the refugees off the site, even though no other location was available. The sharp-tongued Marx, in charge, said that he would comply, but he suggested that the treasurer might “roast in hell” for such an unkind act. Lathrop rescinded the order and instead fenced the field.²⁸

Some, however, worried about the impact of the influx of the desperate on local tranquility. “The real sufferers are unable to come the 35 miles. So we are more afraid of the lawless element,”

wrote Payson Treat. “All the towns are under guard. Citizens generally go armed. Martial law exists in San Jose, and in the smaller towns people are not allowed to go

about at night unchallenged. In Palo Alto many of the business blocks were destroyed and their contents are exposed. We hope that no complications will follow.”²⁹

To prevent burglaries and looting, Town Marshal E. F. Weisshaar quickly mobilized 150 deputies to patrol points of entry into Palo Alto. “A great service was rendered the city by the guards stationed at the bridges,” praised the *Palo Alto Times* on May 2.

These are the only approaches to the city from the north and at night all suspicious characters were halted, questioned and searched. Many who could not give a good account of themselves were detained under guard until morning. This undoubtedly saved the town from many robberies by crooks, who

were moving south from San Francisco and who would have accepted the chance to burglarize a house had the city been unguarded and had there been an opportunity of entering the city and getting out again before morning.

No burglaries were reported, and Palo Alto was said to have been better protected than even San Francisco in terms of the ratio of armed guards to the size of its area and population.³⁰

Was the threat of brigands as serious as Marshal Weisshaar and the *Times* perceived? Stanford student Ernest Nathaniel Smith (’08) had his doubts. Writing his aunt in New York, he reported that:

Several of us were sworn as Deputy U.S. Marshals and sent to guard a railway bridge. There were wild tales afloat that bands of looters from the city were making their way southward in flight and seeking to pillage wherever they could. We were told to stop and search everyone coming along the track, take all weapons away and render assistance when we met homeless people. We didn’t meet any of the cutthroats and thieves prophesied and didn’t have nearly as much trouble as we anticipated.³¹

Theft on campus, if not in Palo Alto, however, was a serious problem. “It was not very long before saboteurs or souvenir hunters began work,” remembered engineering student Edgar C. Smith, who enlisted other young men to help guard campus buildings—10 posts on two-hour shifts around the Quad. “A woman,” he related, “was caught getting away with a part of a leaded window containing the face of Christ which she had broken out of a fallen Memorial Church window.” Later, they found, someone had broken off and stolen a hand of the Angel of Grief statue. After thefts at the Museum, guards were posted there. Even the doubting temporary deputy Ernest N. Smith had two coats and other possessions stolen from his trunk while

camping outside of his fraternity, the badly damaged Chi Psi house.³²

A GREATER PALO ALTO

Estimates of Palo Alto's losses from the earthquake varied from \$150,000 to \$200,000.³³ "While the loss in buildings is great, many being total wrecks, most of the business houses compute their loss in stock very high, and the suspension of business adds still another item to the account," a Palo Alto reporter wrote for the *San Jose Mercury* on April 25. Palo Alto residents, however, saw this "lull" as temporary "and are looking forward to a greater Palo Alto, when many San Franciscans will come here seeking homes. One real estate firm stated today that every available house had been rented to families who are locating here to be near the city when it rebuilds."³⁴

"The future of Palo Alto is assured by the spirit of her business men," the *Palo Alto Times* gloated a week later. "They believe in the town and have taken hold of the new problems that have arisen since

the fateful 18th of April with a courage that makes success a certainty."³⁵

The day after the earthquake, the county's Building and Trades Council in San Jose announced its commitment to keep wages at pre-earthquake levels to enable residents, many left destitute, to rebuild without price gouging by contractors, and several major building supply companies advertised that they would keep supplies to pre-earthquake prices. Two weeks after the quake, the *Palo Alto Times* could report that "building operations on University Avenue are in a state of great activity," held back only by labor shortages. After inspecting Palo Alto's schools on the day of the earthquake, Professor Show unsuccessfully sought a bricklayer to put things right, but workmen already had too many orders to get to the school's chimneys with much dispatch. When a brief labor strike followed the university's decision to hire non-union labor, Palo Alto residents took advantage of the opportunity to hire some of the striking campus laborers.³⁶

Many businesses decided to repair, restock, and reopen for business as quickly as possible. Its

STANFORD UNIVERSITY ARCHIVES



The Chi Psi fraternity house collapsed inward from the force of the earthquake.

On Alma Street in Palo Alto, the earthquake destroyed the recently completed Thiele building, constructed of concrete blocks.



plaster ceilings gone, Frazier's Dry Goods store restocked, opened with ceilings of white muslin from its own supplies, and enjoyed more business than ever. Some considered new sites. Owners of the Simkins Building contemplated moving the remaining shored-up framework to a lot on Hamilton, even though the building's plumbing, wiring, roof and woodwork had largely withstood the twisting that the building had suffered in the earthquake. Some businesses took the opportunity to expand. Difani's barbershop added another chair, two baths, and a bootblack stand. The Christensen Darling Company added a sheet-metal shop to the back of its hardware store. First National Bank expressed confidence in Palo Alto's future by announcing construction of a branch, as previously planned, at the corner of Ramona and University; it would be "a commodious structure, strictly modern in all its appointments, which will set a new standard for business buildings on the avenue." The proprietor of the newly reinforced and refurbished Palo Alto Hotel and dining room, meanwhile, was busy taking reservations from San Franciscans fleeing southward.³⁷

Dr. Mosher found much of the debris well cleared up by the time she returned to Palo Alto in June and proudly noted "an air of business activity which would be surprising in an eastern community after such a catastrophe."³⁸ As late as June 3, the town's "Promotion Committee" was so embarrassed that debris from the Thiele Building was still piled up on the sidewalk and street that its owner was served with a 24-hour notice to remove it. The committee even intended to put up a large signboard in the street in front of the building "to hide the wreck from the view of those who arrive at the Southern Pacific Depot. ...It will be disposed of when the owner and contractors wish to begin work of restoring the building." It was not simply an issue of public safety, but of civic pride.³⁹

Real estate interests were quick to recognize the opportunity to house families who had lost their homes in San Francisco. The *Palo Alto Times* pointed out that restoration of homes was proceeding slowly due to heavy demand for labor and supplies for large office, hotel and business structures. Still,

*The demand for suburban houses will be unprecedented. Every available house here and on the campus can be filled in short order and as many more as men and materials can be found to erect. Rents must be kept within reason, for unless they are the measure of our prosperity will be limited accordingly.... Palo Alto will get all the people she can accommodate if train service is provided and the advantages of Palo Alto in the way of suburban residence properly advertised.*⁴⁰

Among the real estate companies stepping in to capitalize on the situation was J. J. Morris. The firm ran promotionally soothing advertisements urging readers to “Let Us Forget the Earthquake. This is Palo Alto’s Opportunity. If you really desire a home at Palo Alto, come and talk the matter over with us. The payment of \$15.90 per month for 36 months [\$572.40] will give you a clear title to a 50-foot lot with cement curb and sidewalk. The payment of \$25.00 per month will give you a beautiful cottage home. You had better investigate these propositions.”⁴¹

Another Morris advertisement began: “Don’t Worry—It could be Worse—Cheer Up” and went on to offer a \$2,500 house in Palo Alto with seven rooms and bath on a 50 foot by 150 foot lot with a sunny exposure, noting “House stood test of earthquake—Chimneys are in place just as before—Owner in Europe wants to sell.”

Dr. Mosher enthusiastically concluded in her June report that:

The sky is just as blue, the lawns and hedges just as green, the roses just as sweet under the California June sunshine, as they have always been. The people look happy, prosperous and contented. ... We know now the type of house to build, and the type to avoid. There will be fewer poor houses put up and good work counts for more than it did before. New people are coming here to live, and the town is growing faster

than ever before. Instead of Palo Alto being downed by the earthquake, it looks as if it were but the beginning of a brighter era, and all the business men are talking about “THE GREATER PALO ALTO.”

Lest one think Mosher was swept up in local boosterism, it is worth a look at William James’s thoughts regarding reactions to Northern California’s earthquake. “Hearts concealed private bitterness enough, no doubt,” the philosophy professor wrote in his article *On Some Mental Effects of the Earthquake*, “but the tongue disdained to dwell on the misfortunes of self when almost everybody one spoke to had suffered equally. The cheerfulness, or at any rate the steadfastness of tone, was universal.” Indeed, once the enormity of the calamity became clear, Stanford faculty and students quickly joined with Palo Altans to deal with the emergency and to reach out to do what they could to assist others. It was this “can do” spirit of town-gown interaction and cooperation that James saw and admired.⁴² ♣

Tom Wyman, B.S. '49, M.S. '51, is the immediate past president of the Palo Alto Historical Association. He is the author of “Palo Alto and its Libraries, A Long-Time Love Affair,” “Professor Fernando Sanford and the Discovery of X-rays,” and “Charles David Marx—At the Heart of a Town-Gown Relationship,” which appeared in the Winter 2004 issue of Sandstone & Tile.

Roxanne Nilan, Ph.D. '99, is a historian and served as Stanford University Archivist from 1979 to 1990. She is the coauthor of three books and numerous articles about Stanford. Nilan is currently a guest curator of History San Jose’s exhibit, “It’s Our Fault Too: The Impact of the 1906 Earthquake on Santa Clara Valley,” which opened April 11 at Kelly Park in San Jose.

The authors would like to thank Steve Staiger, Palo Alto Historical Association; Jim Reed, History San Jose; and Maggie Kimball, Becky Fischbach, and Christy Smith, Stanford University Libraries.

ENDNOTES

- ¹ Guido H. Marx, *Autobiography*, p. 42, Guido H. Marx Papers, Stanford University Archives. The Cornell-educated professor of machine design joined the Stanford faculty in 1895.
- ² *Stanford Alumnus*, May 1906, provides an excellent report on campus experiences, damages, and outlook. [This issue is available at <http://histsoc.stanford.edu/pdf/AlumV7n08.pdf>. Also on the Society's Web site is Roxanne Nilan, "A Young University is Tested," *Sandstone & Tile* 3:2 (Winter 1979), pp. 1–7]. For excerpts from 12 first-hand Palo Alto accounts, see Linda Dick, *Palo Alto 1906* (Cupertino, Ca.: California History Center, De Anza College, 1979). Population figure extrapolated from the 1900 U.S. Census for Palo Alto of 1,658.
- ³ Marx, *Autobiography*, p. 42.
- ⁴ Arley B. Show, [Earthquake Account, 1906], pp. 1–2, 1906 Earthquake Files, Palo Alto Historical Association (Palo Alto Public Library). Show served on the Stanford faculty from 1892 until his death in 1920.
- ⁵ Marx, *Autobiography*, p. 43; Show, p. 2.
- ⁶ Marx, *Autobiography*, p. 43; Show, p. 3.
- ⁷ Show, p. 2.
- ⁸ Show, pp. 3–4.
- ⁹ *Palo Alto Times*, 1 May 1906.
- ¹⁰ *San Jose Mercury-Herald* [joint] special edition, 18 April 1906, History San Jose. Local newspapers did their best, sorting out credible reports from overwrought eyewitness accounts, with subsequent editions tempering and elaborating on earlier reports.
- ¹¹ Guido H. Marx, "A Committeeman's Account of the Palo Alto Relief Work at the Time of the 1906," [read to the Social Science Club, fall 1906], appendix to his autobiography cited above.
- ¹² Dr. Clelia D. Mosher, "What the earthquake did at Palo Alto, and afterward: an illustrated letter," June 1906, pp. 6–7, Earthquake Collection, SC206, Stanford University Archives (hereafter Stanford Earthquake Collection). An alumna of Stanford (AB '93, AM '94 and MD John Hopkins '00), Dr. Mosher also served as the Stanford medical advisor to women, director of the women's gym (1893–96), and professor of hygiene (1910–1929).
- ¹³ California State Earthquake Investigation Commission, *The California Earthquake of April 18, 1906: Report of the State Earthquake Investigation Commission*, vol. 1 (Washington, D.C.: Carnegie Institution of Washington, 1908; reprint 1969). For Santa Clara County, see part II, pp. 256–88. Much attention was paid to the number of chimneys and water tanks down.
- ¹⁴ Patricia Curran, "The Earthquake of April 18, 1906, in the Santa Clara Valley," *Santa Clara County Pioneer Papers 1973* (California Pioneers of Santa Clara County, 1973), pp. 6, 8, 26n16, 27n33. San Jose's Grant, Lowell and Horace Mann schools were closed. Santa Clara High School and Los Gatos High School, like Palo Alto High, reopened on Monday. *Palo Alto Times*, 1 May 1906, notes reopening of the town's schools with only three days lost (misdating reopening as the 28th, a Sunday and a week too late)
- ¹⁵ *San Jose Mercury-Herald*, 18 April 1906, Curran, pp. 7,11, notes that San Jose water was only briefly interrupted, allowing fire fighters to bring downtown blazes under control comparatively quickly.
- ¹⁶ *San Jose Mercury*, 18 April 1906; *Palo Alto Times*, 1 May 1906. The Charles Marx house at 357 Kingsley was relocated in 1940 around the corner to 1136 Waverley, where it stands today. On the contributions of Charles Marx and his engineering colleague Charles Wing to Palo Alto's utility system, see Tom Wyman, "Charles David Marx: At the Heart of a Town-Gown Relationship," *Sandstone and Tile* 28:1 (Winter 2004), pp.8–13.
- ¹⁷ *Palo Alto Times*, 1 May 1906.
- ¹⁸ Alice James [letter], 18 April 1906, Stanford Earthquake Collection, box 1, folder 6.
- ¹⁹ Mosher, p. 7; *San Jose Herald*, 20 April 1906. A San Jose citizens' meeting held Thursday set up a relief committee but also set public standards regarding food, bread, restaurant and supply prices.
- ²⁰ George A. Clark, [letter], 27 April 1906, Stanford Earthquake Collection, box 1, folder 4.
- ²¹ *San Jose Mercury-Herald* special edition, 18 April 1906; Show, p. 3.
- ²² *San Jose Mercury-Herald* special edition, 18 April 1906, reported that hundreds of sheriff's deputies were gathering up the "uninjured insane, who are clamoring on the lawns in an ecstasy of fright and terror." Letters and accounts often mention the rumors. See for example Marx, *Autobiography*, p.43; Alice Smith op.cit; Payson Treat to Father, 18 April 1906, box 1, folder 13, and Edgar C. Smith, "Excerpt from Genealogy and Personal Memoirs of Edgar C. Smith, Stanford class of '07," pp. 27, box 1, folder 10, Stanford Earthquake Collection.

- ²³ Leonard Stocking, Medical Superintendent, *Report of the Disaster which Befell Agnews State Hospital...to the Board of Managers* (9 May and 12 June 1906), provides the most comprehensive information.
- ²⁴ Payson Treat, op.cit.
- ²⁵ Alice James' letter is dated 18 April but was written over the course of several days.
- ²⁶ Show, p. 4.
- ²⁷ Mosher, pp. 17–18.
- ²⁸ Marx, *Autobiography*, p. 44–5.
- ²⁹ Treat, op.cit.
- ³⁰ *Palo Alto Times*, 22 May 1906; San Jose Mayor George Worswick immediately placed the city under martial law, including a 7 p.m. curfew, and the volunteer militia of Company B assembled Wednesday morning to help the police and fire departments deal with the damage and fire and potential looting downtown. They were supplemented by two companies from Livermore and Oakland. *San Jose Mercury-Herald*, 18 April 1906; Curran, p. 17.
- ³¹ Ernest Nathaniel Smith to Jessie, 10 May 1906, Stanford Earthquake Collection, box 1, folder 11.
- ³² Alice James, Edgar C. Smith," p. 27, and Ernest N. Smith, op.cits.
- ³³ *San Jose Mercury*, 25 April 1906, used the figure \$200,000. Mosher, probably given the more conservative and flattering figure by the Promotion Committee, estimated \$150,000.
- ³⁴ *San Jose Mercury*, 25 April 1906.
- ³⁵ *Palo Alto Times*, 1 May 1906.
- ³⁶ *San Jose Mercury*, 19 April 1906; Show, p. 4; *Daily Palo Alto*, "Repairs Progressing," 29 August 1906.
- ³⁷ *Palo Alto Times*, 23 May 1906 and 1 May 1906, *San Jose Mercury*, 28 April 1906.
- ³⁸ Mosher, p. 1.
- ³⁹ *Palo Alto Times*, 6 June 1906. Mosher noted with mixed feelings: "The enterprise of the Promotion committee, I am told, is accountable for the great difficulty in getting pictures of the conditions in this little town immediately after the earthquake."
- ⁴⁰ *Palo Alto Times*, 1 May 1906.
- ⁴¹ J.J. Morris [flyer], Palo Alto Historical Association.
- ⁴² William James, "On Some Mental Effects of the Earthquake," *Youth's Companion*, 7 June 1906, p. 283, is reprinted in Malcolm E. Barker, ed., *Three Fearful Days: San Francisco Memoirs of the 1906 Earthquake and Fire*, San Francisco: Londonborn Publications, 2006, pp. 292–297.

Mass Meeting

TO ARRANGE

Relief Measures

For San Francisco Sufferers Arriving Here

Congregational Church

7:30 p. m.

**Signed: MARSHALL BLACK, Chairman
J. E. McDOWELL, Secretary**

Palo Alto Relief Committee

“A Prompt Grasp of the Situation”

Palo Alto, Stanford, and the Relief of San Francisco

ROXANNE L. NILAN

As news arrived of San Francisco’s destruction from the earthquake and fire, people throughout California contemplated what they could do to relieve the suffering city. An estimated 68 towns sent at least one freight car full of supplies to the city in the first few weeks after the April 18 quake, but few relief contributions were as efficient, wide-ranging, and effective as the combined efforts of Palo Alto and Stanford.

Within 24 hours of their first meeting early on April 19, Palo Alto and Stanford volunteers were gathering and organizing the distribution of food, milk, clothing, and medical supplies, arranging to feed and care for refugees, and gathering information to help reunite friends and relations. The Palo Alto–Stanford relief effort helped thousands of earthquake victims in both Palo Alto and San Francisco. So successfully operated were its San Francisco stations that the city’s relief headquarters would turn the entire South of Market district over to its ministrations.

Ironically, some considered this remarkable effort by a combined town and campus population of less than 3,000 not a success but an almost laughable overreaction. “The completeness of organization at Palo Alto,” visiting Harvard professor William James commented later that year in a national magazine, “was almost comical. People

feared exodus on a large scale of the rowdy element of San Francisco. In point of fact, very few refugees came to Palo Alto. But within 24 hours, rations, clothing, hospital, quarantine, disinfection, washing, police, military, quarters in camps and houses, printed information, employment, all were provided for under care of so many volunteer committees.” As this article will show, however, the Relief Committee’s work was respected in San Francisco as a particularly valuable effort that was, from the outset, outwardly focused and inventive rather than reactionary or unnecessarily energetic.¹

AID TO SAN FRANCISCO

By the evening of Wednesday, April 18, the day of the quake, Palo Alto and campus residents had seen enough “aimless wandering” and “taking stock.” The curious and concerned who had gone up to San Francisco by bicycle, wagon, and car returned with stories of desperation and the great fire that was ravaging the city. San Franciscans fleeing southward toward the Ocean View district and the little community of Colma had inundated the neighborhoods there, both of which lacked adequate food or shelter. City bakeries were out of commission, no milk could be delivered, supplies of all types were precarious, and grocery stores, where still operating, were gouging prices. According to Stanford Machine Engineering Professor Guido Marx,

The day after the earthquake, more than 20 Palo Alto residents launched the Palo Alto Relief Committee, with seven original operating committees.

*It was late Wednesday afternoon or early Thursday morning before we had come to a full realization of our own state and had actually begun to sense the significance of what was happening in San Francisco. And so it was relatively a very prompt grasp of the situation which led some of the citizens of Palo Alto to put up the cards calling for a mass meeting for eleven o'clock Thursday morning at the Southern Pacific Depot to form a relief committee. From that time on things happened.*²

On Thursday morning, more than 20 Palo Alto residents met at the train depot and set in motion

the Palo Alto Relief Committee, with seven initial operating committees. From the first, its purposes were twofold: to help those unable to get out of the city and to help those fleeing south, based on the expectation that some portion of San Francisco's estimated population of 300,000 was bound to come by road and, shortly, by rail.³

From the outset, the responses of Stanford and Palo Alto were intertwined. Marx and fellow town resident Arley B. Show, professor of medieval history, played major roles in organizing and administering the Palo Alto Relief Committee. Two campus residents, Rufus L. Green, professor of mathematics,

STANFORD UNIVERSITY ARCHIVES



The quake caused the earth to buckle along the fault line on Alpine Road, to the west of campus.

and John (Jack) E. McDowell, the university's assistant registrar, marshaled scores of student volunteers. Green took charge of the committee's San Francisco stations and personally took over the difficult problem of bread supply. Palo Alto businessmen Marshall Black, B. Fred Hall, and C.E. Childs rounded out the committee chairs. These men were joined by hundreds of Stanford students and dozens of Palo Alto and campus residents, both individually and through an array of civic and church groups.

By the time a mass meeting of town and campus residents assembled on the evening of the 19th, committee chairs were able to report on efforts underway to help those who were unable to leave the city. Committees were already gathering monetary donations and collecting pledges of supplies. The merchants' association had met to gear up for increased demand and establish new lines of supply independent of the jobbing-houses in San Francisco.

Several students spoke up "with deep feeling," Marx later remembered, "of the sense of impotence they had felt in the matter of assisting the stricken, [and] their strong wish to do something." Stanford student Frank Hill, '08, reportedly "electrified" the Palo Alto audience by offering the support of hundreds of students in the work of getting milk and soup to San Francisco and in personally seeing that "the food was given to those who needed it most."⁴ Trustees of the Congregational Church offered its kitchen and dining room, which representatives of Stanford and Palo Alto women's groups offered to staff.

Late into Thursday night and early Friday morning, students gathered and loaded 350 gallons of milk from local milk suppliers and 150 gallons of soup that had been prepared at the Catholic Church onto the 5 a.m. "milk train." David Curry, a Palo Alto trustee (city council member), and 14 students accompanied the supplies up to the city. They were met at the outskirts of San Francisco, at the Ocean View train

station, by more students and Stanford's charismatic football coach James Lanagan, another Palo Alto resident. They then set out in three wagons toward the Mission district to distribute the supplies as needed.⁵

On reflection, Curry later wrote, these efforts were perhaps too early in the relief effort to be effective. It was not pots of hot soup that were needed but milk and bread, rice and beans. The demand for milk, especially, "was urgent," Show wrote, "the supply was precarious, and the dairymen for the most part only half-hearted in their cooperation." Professors L.M. Hoskins and E.D. Adams took over the task of cajoling dairies for milk, but the more serious problem was distribution. People clamored for milk, but relief workers had to let freight car loads of it spoil because the city's milkmen had taken back all the available milk cans.

"The first few days," remembered one student worker, Edgar C. Smith, '07, "we just poured out the milk into any kind of container the people brought, all the way from bed chambers [pots] to wash tubs." This makeshift distribution effort continued for another two or three days, until the Relief Committee

The demand for milk, especially, "was urgent," and "the supply was precarious"

stabilized operations at permanent stations located at Ocean View and Colma—where Coach Lanagan had set up temporary stations—and at 25th and Guerro (near the Valencia Street train station),

a site that was soon dubbed "Camp Stanford" by its supervisor, Professor Rufus Green.⁶

Smith, who had served on student patrol in the Quad on the night of the earthquake, recalled his experience several days later on the milk distribution brigade:

We arrived at the 25th and Guererra [sic] Street station in the rain and pitch dark about ten o'clock and a group of Stanford students unloaded the freight and put it in an Italian's store which had been taken over as a Stanford students relief headquarters. A lot of small stores had tried to take advantage of the calamity and raised their prices something shamefully.

When the soldiers discovered such a store, they confiscated the contents and told the people to help themselves—just retribution, I thought. We had to work in the dark to unload the freight because there was no electricity and open flame lights were prohibited. I managed to curl around some boxes or barrels and got room enough to lay down and sleep, and what an eye full I got when daylight came.

Smith also remembered trying to regulate distribution somewhat by the size of family, but soon realized that some residents were outsmarting the relief workers. “They borrowed the neighbors’ kids when they came after milk... The real moochers,” he recalled, “knew how to get food and they were able to lay in a stock of supplies so they probably lived better for the next year than they ever had in their lives.”⁷ It took at least a week to work out a more effective and fair distribution system, and Stanford relief crews soon were getting milk to the hospitals and distributing it into the neighborhoods.

Before relief stations were established, carloads of donated items had been dropped almost randomly by railroad in various parts of the city. “One neighborhood,” Smith recalled, “got a carload of oranges, another a carload of canned meats, etc. One district near us got a carload of Arbuckle’s coffee, unground, in pound packages.” Marx and Green quickly realized the need for good information and timely communication. So Green’s students were sent out with note cards to assess, house by house, the needs of the specific neighborhoods. Green

also kept the Palo Alto workers informed about conditions in the city and the types of supplies they needed most. The committee, in turn, kept in close contact with San Francisco’s relief headquarters. “What people in general did not know,” Marx noted, “was the excellence of our information service.”⁸

As with distribution, much would be learned quickly about the complexities of supply. The bread problem soon became so complicated that Green took it on himself, aided by Professors Colbert Searles and Henry R. Fairclough, Frank Cramer, and the Rev. C.G. Baldwin.⁹ It was not simply a matter of locating and enlisting the aid of Peninsula and San Jose bakeries, but in assuring local bakers of enough flour, yeast, and journeymen bakers to get the job done. An initial donation of 2,400 loaves from San

Jose, Redwood City, and Mayfield met the immediate need, but supplies had to be rationed by half-loaves until production could be increased. The weekend saw committeemen scrambling across the Bay Area in the

Stanford relief crews soon were getting milk to the hospitals and distributing it into the neighborhoods

search for more flour. One hunted through the city for two days for out-of-work bakers to meet the labor shortage. Others drove wagons to transport loaves to the Palo Alto depot. On Monday, the problem was a yeast shortage. Bakeries were experimenting with donated flour of differing quality and with potatoes and brewer’s yeast until supply sources were confirmed. By Wednesday, Peninsula bakeries were running above full capacity and would continue to do so until San Francisco bakeries were back in business on May 3.¹⁰



The Congregational Church at the corner of Waverley and Hamilton in Palo Alto served 250 to 300 meals a day in a 24-hour kitchen.

RELIEF MISSION

In the two days of fire following the earthquake, “every hotel and bank, every large store and nearly every storeroom and wareroom in the City had been destroyed,” recalled General Frederick Funston, acting commandant of the Army’s Pacific Division. “Three hundred thousand people were homeless, and thousands more were left without the means of livelihood.” Funston was busy ensuring that “rations, tents, and blankets on hand at the army posts adjacent to the City were dealt out to the sufferers with no account of the responsibility involved; and within two days, relief supplies from neighboring states and cities and army supplies from various army posts had begun to arrive.”¹¹

Funston, however, admitted to the Relief Committee’s Jack McDowell that city authorities were unable to look after any neighborhood south of Market Street. Removed from the city center and the great fire’s mile-long front, houses in these districts were still standing. As a result, however, they were increasingly overcrowded with refugees, many suffering from sickness and want of food. Funston responded to the need by authorizing the Palo Alto Relief Committee to take charge of the work south of Market.¹²

On Friday morning, April 20, at McDowell’s suggestion, a call for student volunteers had gone out on campus, and a large meeting was held on the lawn in front of the Phi Delta Theta house. Student “captains” were selected and assigned 12 to 20 volunteers. Among the captains were a future Stanford Board of Trustees president (Paul C. Edwards, ’06), a future English professor (Edith Mirrieles, ’06) and Elsie Branner, ’08, daughter of the university’s Vice-President John Casper Branner.¹³ University officials were somewhat leery of allowing women to go to the city and encouraged them instead to work with the local committees and the Guild Hospital on campus. But they went anyway to canvass needs, distribute clothing, and keep the “sidewalk kitchens” going for the men who distributed milk and food at the relief stations and by wagon.¹⁴

Having assumed responsibility for the territory south of the burned-out portion of the city, Professor Green and his Stanford students found themselves serving both the neighborhoods and the refugees crowding the train stations, hoping to depart. “I will never forget the awful sight and smell in the Southern Pacific Railroad station,” recounted Edgar Smith. “It was filled with women and children who

apparently had just sat there in their own filth for the past three days and I heard it said that there were several babies born there the first or second day.”¹⁶

McDowell was sensitive to criticism that some students, eager to gawk at the destruction or see relatives, used the committee to get to the city but then shirked work. There were such cases, and they were not limited to the student body. As McDowell noted, however, “During all those strenuous days, nothing but praise was heard from all sides regarding the good and faithful work that was being accomplished.” The red Stanford Relief badge was in evidence across the city, he pointed out. In fact, he added, “when passes had been issued from so many quarters that it became necessary to revoke all except those issued from [city] headquarters, an exception was made in favor of the Stanford badge.”¹⁷

The promptness and quality of Stanford relief work, he judged, was impressive. “Considering the brief time in which to organize, the large force required, the speed necessary for disposing of work, and the inexperience of the men, the thoroughness of the work accomplished is miraculous,” McDowell stated. “The work was difficult, arduous, nerve-racking.

There were no choice positions, every man was doing hard labor, and was eager for the opportunity.”¹⁸

A BEEHIVE OF BUSY INDUSTRY

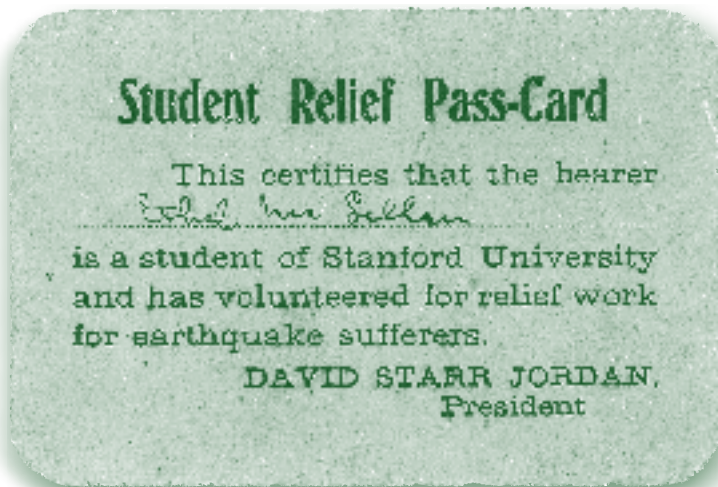
“Many people who are driving through make this their stopping place over night, or for warm meals,” a Palo Alto report stated in the *San Jose Mercury* a week after the earthquake.¹⁹ During the first two weeks after the temblor, some 6,000 people came through Palo Alto and received help. The Palo Alto Relief Committee had expected and prepared for many more, but many people, dazed and unwilling to give up their free but hard-won seats on overcrowded trains, sped through the town.

“At Palo Alto, the Relief committee had prepared to entertain many of the refugees, but the train loads would pass by again and again for San Jose,” wrote Beryl Bishop, a frustrated student volunteer. “This and Los Angeles seemed to be the prospective points for all refugees, though most of them did not have any idea as to what they would do when they reached these places, where the depots were already being over-flowed.”²⁰

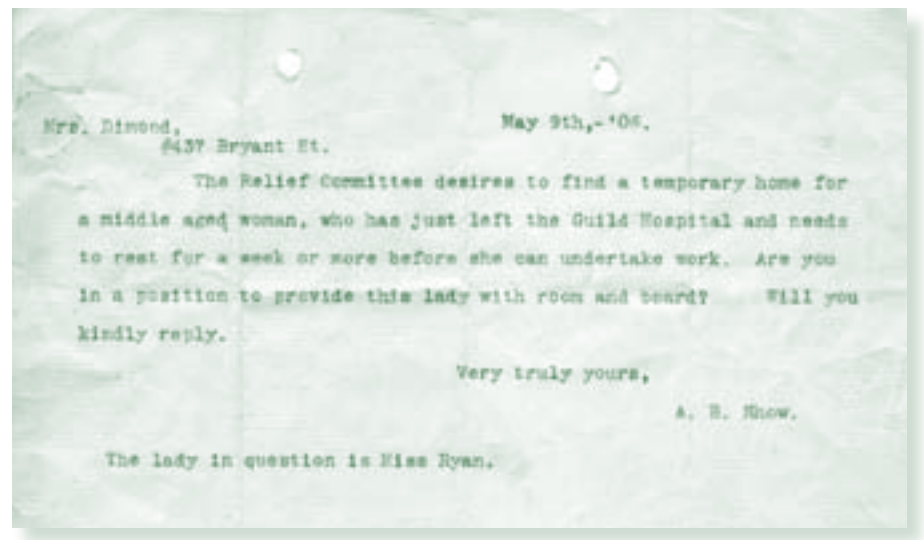
Some blamed the view from the Palo Alto depot. “Many refugees did not stop here, as they would have done had it not been for the false impression given of terrible devastation in town,” noted Palo Alto physician Clelia Mosher, whose office was near the circle; “besides the collapsed buildings, University Avenue was filled with debris and roped off—all in plain sight of the passing trains.”²¹

By late Friday, the Relief Committee had set up a camp near the Palo Alto train station to “detain” (that is, control) the flock of refugees they envisioned heading south from San Francisco. The campground was, in fact, exceptionally well prepared by local physician John Spencer, with medical facilities, latrines, and other supplies. Nearby Benepe Hall (formerly Benepe’s Feed Barn on

STANFORD UNIVERSITY ARCHIVES



Stanford volunteers identified themselves in San Francisco with a red Stanford Relief pass.



The Palo Alto Relief Committee found temporary housing for 550 to 600 refugees who needed assistance for extended periods.

Hamilton), was also fitted out with mattresses and bedding for women and children. “The University town is today one grand haven of rest for the sick, homeless and needy earthquake and fire sufferers from San Francisco. ...The chief disappointment these committeemen have seems to be that so few sufferers are coming to our doors,” stated a Sunday *San Jose Mercury* report from Palo Alto. “Probably no line of activity undertaken in the community,” commented Arley Show, “revealed so clearly the wide discrepancy between anticipation and realization as this detention camp.”²²

Beryl Bishop, on her way back from relief work in the city late one night, found “many tired mothers and children aboard who would be compelled to travel all night, or sit up at the depot at San Jose. This seemed altogether unnecessary when Palo Alto was waiting to welcome them.” She took matters into her own hands. “I went through the eight long cars and gave each person a special invitation in behalf of the Relief Committee. ...Some very weary mothers were persuaded to stop off for a good nights rest, and when we reached Palo Alto 30 tired hungry refugees were gladly following us down the sidewalk to the Congregational Church where inviting tables were spread and ladies in attendance all through the night. Many homes were opened for the Relief Committee’s use, and all who came were gladly entertained.”²³

The Congregational Church at the corner of Waverley and Hamilton had become a “beehive of busy industry.” By Sunday, its 24-hour kitchen was serving 250 to 300 meals a day for relief workers in the city, at the campground, and at Benepe Hall. The building also served as de facto general headquarters of Relief Committee work, a central information hub, and the main center for receiving, sorting, and redistributing bread, milk, and other food, clothing, bedding, and medical supplies.

Arley Show and Guido Marx shepherded the relief work centered at the church. “Strictly speaking,” Show explained, “mine was the in-taking committee and his [Marx’s] was the out-giving committee,” but in all reality there was little distinction. “Everybody worked to get things in and to get them out again.” Gradually a spontaneous reassignment ensued, as Marx and his volunteers took on responsibility for food, and Show and his committee took charge of clothing and other supplies. In time, Show would inherit just about everything not related to the food supply line to the city, including the information directory, employment bureau, housing, toy distribution, and “a hundred other matters...all of which,” Marx noted, “would have swamped a man without his capacity for remaining calm and methodical.”²⁴

West of Saratoga, the fault tore up a yard and passed beneath the porch of a house.



At first, there was no shortage of volunteers. “The main problem,” Show recalled, “was to select the best men and women for the various tasks.” Friends followed friends, he admitted; thus professors tended to add other university folk to their ranks—not simply out of acquaintanceship, but because the university’s closing had left them “without immediate occupation, and most of them were heartily glad to serve.”²⁵ Ongoing service past the first few enthusiastic weeks was more difficult for the Relief Committee’s businessmen, most of whom resigned to work on rebuilding Palo Alto’s business district and its related real estate opportunities.

The Congregational Church opened at 7 a.m., Friday morning, April 19, with volunteers working in five shifts, day and night. Their first guest was a Stanford alumnus and his new bride, whose only food since Wednesday morning had been a tin of sardines and crackers. Meals were served around the clock to provide for late train arrivals, the marshal’s night patrols, and student workers returning from San Francisco. An outdoor stove supplemented the kitchen, and donated meals were brought over from homes throughout Palo Alto.

“To send food to the hungry in the City was good but it was better to feed the hungry on the spot and

to be sure they had what was intended for them,” Show stated. “The dining room served also to ease the emotions of us all who were disappointed that the refugees did not swarm in upon us as we had expected they would.”²⁶

The Sunday-school room had to serve as a dining room because the church’s actual dining room had become the center for receiving, sorting, and distributing general supplies. Although crowded with boxes, bundles, and bales going in and out, it was also the meeting place for the supply and distribution committees, returning city relief workers, and volunteer patrolmen. “Masses of clothing poured in upon us day by day,” Show recalled. “Our chief concern became to keep the rooms cleared for the daily accumulations.”

Volunteers carefully inspected, sorted, labeled, packed, and sent hundreds of bundles of new and used clothes to the Stanford stations as well as to the San Francisco Associated Charities, Red Cross, and other city relief organizations.²⁷ Unbeknownst to the hardworking ladies at Palo Alto, however, not all of their work was as neatly distributed as it had been packed. Returning to the 25th and Guerrerro Street station after making a delivery, Edgar Smith found “a regular riot going on.”

*The clothing had all been dumped out of the sacks and men and women were grabbing and fighting for choice articles. I remember seeing a very old man fight his way out of the crowd with a bundle and when he held it up to see what he had, it was a pair of ladies panties. I got some Stanford help and we waded in with clubs, drove the people out, and retrieved most of the clothing. We bundled it up again and sent it on its way but sad to report it was not in the sorted condition the dear ladies of Palo Alto had arranged.*²⁸

Meanwhile, Palo Alto physician Tom Williams, '96, and a "sanitary subcommittee" enlisted the help of local druggists in collecting and sending medications, bandages, and antiseptic cotton to hospitals in San Francisco. "Some of our best workers were connected with the hospitals in the City," Dr. Mosher wrote, "and we sent them the supplies they needed so far as we were able to do so." This effort also proved to be one of the most successful in attracting donation checks.²⁹

Most of the refugees who found a warm meal, a night's rest, and a sympathetic ear moved on, but 550 to 600 people were put up in local housing for extended periods. Although very few refugees needed to stay after the first two weeks, there were a number of destitute, chronically ill, or "incompetent" people who became long-term relief cases. The housing committee located friends and relations; found temporary homes for some "altogether unhappy refugees," Show wrote, "who were cared for several weeks at a time without charge"; and found jobs for the able-bodied who wished to remain.³⁰

WINDING DOWN

Over time, "as the work settled into slow and prosaic routine," Show wrote, "it became less attractive and seemed less urgent to many who had at first been full

of ardor and devotion." It was an ongoing problem to find people "who could be at their posts day by day, and assume definite responsibility. ...The first flush of enthusiasm was passing away. The drudgery no longer looked so romantic."³¹

The nature of the work, too, was difficult. "Everybody felt the strain," Show remembered, "and a good many gave way under it." Rufus Green, for one, seemed to be everywhere. Marx worked 12- to 20-hour days, rising early in the morning to see milk and bread shipments off on the 5 a.m. train. He was still at work late at night checking on supplies at refugee

The Congregational Church opened at 7 a.m., Friday morning, April 19, with volunteers working in five shifts, day and night

quarters. Show was at the church by 8 a.m. and rarely left before 9 p.m. Even he admitted losing his grip one morning when he arrived to find "a congestion of urgent business" and sat for a moment unable to function. The only way they could handle the wear and tear, he

reflected, was "through deliberate efforts to keep cool and to meet their problems calmly."³²

During the first few days, there had been examples of misunderstanding, bickering, and frustration. Fortunately, concluded Show, "our local organization never reached the sorry state of helpless tangle and working at cross-purposes that seems to have characterized the relief system in the City." Given the nature of the work, it was simply too hard to set up an inflexible routine or claim preemptive rights. "With so many hearts aflame and so many hands ready for service," Show wrote, "the marvel is that things coordinated as well as they did."³³

From its first flurry of activity the day after the quake, those involved in the joint Palo Alto–Stanford relief effort had no doubt of the value of their work and the need for the supplies sent north. “The Stanford men have won a warm spot in the heart of every resident of San Francisco by their untiring and self-sacrificing work,” Dr. Clelia Mosher wrote proudly. By April 25, a daily average of more than 7,000 loaves of bread and 900 gallons of milk, along with groceries, clothing, and medical and other supplies were sent to the stations from the Palo Alto train depot.³⁴

By the 29th, however, it was clear that the refugee work in Palo Alto could be wrapped up. The campground, the women’s dormitory at Benepe Hall, and the relief kitchen at the Congregational Church were closed. The committee retrenched, but Professors Marx and Show continued to oversee Palo Alto’s supplies for the Stanford relief stations in San Francisco, where Professor Green remained in charge. Soon, however, these efforts, too, began to wind down. On May 1, milk dealers in the city resumed service, and two days later the stations ended their “bread rustling.” Work was consolidated into one station until that, too, along with the remaining cadre of Stanford volunteers, was turned over to the San Francisco Relief Committee.

Statistics tell something of the success of the Palo Alto–Stanford relief effort. According to Marx’s calculations, the Committee quartered 600 in Palo Alto and clothed 400. It sent to San Francisco 75,000 loaves of bread, 10,000 gallons of milk, 1 ton of baked beans, 400 gallons of soup, 300 pounds of dried fruit, and 1,200 sacks of clothing to three fully outfitted Stanford relief stations, as well as 22 hospitals and seven additional San Francisco stations. “Not a bad record for a small town,” Marx reflected, “itself hit pretty hard by the earthquake.”³⁵

The Committee’s work also imparted a clear sense of accomplishment. One “bread rustler,” Professor Colbert Searles, summed up this feeling

particularly well: “Nothing could have been finer than the spirit shown by everybody in this great crisis. It was an inspiration and those who took part in this relief work received much more than those whom they assisted. It was not as a duty accomplished, but as a pleasure deeply enjoyed which we can all look back upon with the greatest satisfaction.”³⁶

Dr. Clelia Mosher was incensed by William James’s description of the Palo Alto–Stanford effort as “comical.” She responded in her June 1906 report that, while Palo Alto may not have received

The Committee sent to San Francisco 75,000 loaves of bread, 10,000 gallons of milk, 1 ton of baked beans, 400 gallons of soup, 300 pounds of dried fruit and 1,200 sacks of clothing

the number of refugees it expected, “it was impossible to foretell what the problems would be.” The organization, she noted, had been especially effective in serving the devastated city. The efforts of this comparatively small community were not comical but a “splendid

example of self-forgetfulness on the part of the men and women who put aside their own losses and discomforts to minister to the greater need of their stricken neighbors in San Francisco.”³⁷ ❀

Author and historian Roxanne Nilan, Ph.D. ’99, was delighted to learn of her alma mater’s significant contributions to the relief of “The City,” where four generations of her family have lived. Special thanks go to Steve Staiger and the Palo Alto Historical Association for sharing the voluminous files of the Palo Alto Relief Committee in their care.

ENDNOTES

- ¹ William James, "On Some Mental Effects of the Earthquake," *Youth's Companion*, 7 June 1906, p. 283, is reprinted in Malcolm E. Barker, ed., *Three Fearful Days: San Francisco Memoirs of the 1906 Earthquake and Fire*, San Francisco: Londonborn Publications, 2006, pp. 292–297.
- ² Guido Marx, "A Committeeman's Account of the Palo Alto Relief Work at the Time of the 1906 Earthquake" [talk for Social Science Club, Stanford, fall 1906]. Appendix to his autobiography, Guido H. Marx Papers, Stanford University Archives, p. 1.
- ³ *San Jose Mercury-Herald* [joint edition], "Palo Alto is Haven of Rest for Sick, Homeless, Needy," 22 April 1906; Marx, pp. 1–3; Arley B. Show, [earthquake account], Earthquake file, Palo Alto Historical Association [PAHA] (Palo Alto Public Library), p. 4; Linda Dick, *Palo Alto 1906* (Cupertino: California History Center, 1979) reprints excerpts of first-hand accounts of members of the Relief Committee collected by Prof. Show, many of which are in the earthquake files of the Palo Alto Historical Association. See also Earthquake Collection, SC 206, Stanford University Archives.
- ⁴ Marx, p. 3; *San Jose Mercury-Herald*, 22 April 1906.
- ⁵ David C. Curry to Arley B. Show, 28 September 1906 [PAHA]; *Daily Palo Alto* [Stanford], 20 April 1906; *San Jose Mercury-Herald*, 22 April 1906. The wagons, provided by one of Palo Alto's several Vandervoorts, came from either the Palo Alto and University Stables or the Palo Alto Transfer Company.
- ⁶ Curry to Show letter; Show, pp. 7–8; Edgar C. Smith, "Excerpt from Genealogy and Personal Memoirs of Edgar C. Smith, Stanford class of '07," Earthquake Collection, Stanford University Archives, p. 31.
- ⁷ This and above quote from Smith, pp. 29–31.
- ⁸ Smith, p. 31; Marx, p. 7.
- ⁹ Show, pp. 7–8.
- ¹⁰ Excerpts of accounts by "bread rustlers" Rufus Green, Rev. C.G. Baldwin, Frank Cramer, and C. Searles can be found in *Palo Alto 1906*, pp. 11–14.
- ¹¹ Gen. Frederick Funston, "How the Army Worked to Save San Francisco: Personal Narrative of the Acute and Active," *Cosmopolitan Magazine* (July 1906), available at the Museum of San Francisco Web site, <http://www.sfmuseum.org/1906/06.html>.
- ¹² J.E. McDowell, "Stanford Men in the Relief Work," Earthquake files, PAHA, pp. 1–2; Marx, pp. 4–5; Beryl Boswell Bishop [eyewitness account, 1906], Earthquake Collection, Stanford University Archives, p. 15.
- ¹³ *Daily Palo Alto*, 20 April 1906; McDowell, *ibid.*
- ¹⁴ Beryl Bishop, p. 19. Bishop (who attended Stanford in 1896–7 and 1905–7) found ways to get around official discouragement and had many hair-raising experiences as a relief worker, but she encouraged women to actively participate. Marx, p. 6; McDowell, p. 3.
- ¹⁵ *Palo Alto Times*, 1 May 1906; McDowell, p. 1. Student enrollment at Stanford at that time was around 1,200, with 75 faculty.
- ¹⁶ Smith, p. 31.
- ¹⁷ McDowell, p. 3.
- ¹⁸ *Ibid.*, p. 2.
- ¹⁹ 25 April report to *San Jose Mercury*, 26 April, 1906.
- ²⁰ *Palo Alto Times*, 1 May, 1906; Bishop, p. 14.
- ²¹ Dr. Clelia D. Mosher, "What the Earthquake Did at Palo Alto, and Afterward: An Illustrated Letter," June 1906, Earthquake Collection, Stanford University Archives, pp. 6–7.
- ²² *San Jose Mercury-Herald*, 22 April 1906. Marx, p. 44; Show, p. 29. On one early night, however, Benepé's barn housed 80 women and children. Mosher, p. 17.
- ²³ Bishop, pp. 14–15.
- ²⁴ Show, p. 15; Marx, p. 6.
- ²⁵ Show, p. 7.
- ²⁶ *Ibid.*, p. 14.
- ²⁷ *Ibid.*, p. 9.
- ²⁸ Smith, p. 30.
- ²⁹ Mosher, p. 16; Marx, p. 6; Show, p. 29.
- ³⁰ Show, p. 22.
- ³¹ *Ibid.*, pp. 6, 11.
- ³² *Ibid.*, p. 17; Marx, p. 44.
- ³³ *Ibid.*, p. 18.
- ³⁴ Mosher; *Palo Alto Times*, 1 May 1906; *San Jose Mercury*, 25 April 1906.
- ³⁵ Marx, p. 7.
- ³⁶ Colbert Searles [earthquake account], PAHA, p. 6, quoted in Dick, *Palo Alto 1906*, p. 14.
- ³⁷ Mosher, p. 18.



Earthquake Science at Stanford

A Historical Perspective

THOMAS WYMAN

*What is [an earthquake]? What causes it? Where does it come from? Will it happen again? and if so, when and where and how much? These are the questions the geologist is expected to answer regarding earthquakes in general, and in particular regarding the California earthquake of April 18. And, as usually happens in such cases, the geologist can half answer some of these questions, and others he cannot answer at all.*¹

— JOHN CASPER BRANNER
PROFESSOR OF GEOLOGY AND
VICE-PRESIDENT OF STANFORD UNIVERSITY

Immediately after the 1906 earthquake, Stanford's President David Starr Jordan and Vice President Professor John Casper Branner made a series of observations reflecting their shared interest in the scientific aspects of the event. Keen to observe first-hand the quake's effects, Jordan, an ichthyologist, traveled to Tomales Bay to trace the San Andreas fault southward and observe the evidence of its movement. He reported seeing miles of displaced fence lines,

Stanford President David Starr Jordan, *right*, and Vice-President John Casper Branner, *center*, studied the scientific aspects of the 1906 earthquake.

uprooted trees and other testaments to the quake's violence. In one place, Jordan recorded,

*the earth yawned in a corral where the men were engaged in milking cows, one of which was engulfed, —a pathetic tail only indicating her fate, from which the superstitious Portuguese dairymen made no attempt to rescue her....From (Crystal) Springs to Monte Bello, a distance of about eight miles, devastation in the fertile valley of Portolá consisted of wrecked houses and the shifting of line fences, both characteristic over the whole course. In the hills to the southward along Los Gatos Creek, roads were torn up and landslides thrown down. On the Feely Ranch, some ten acres of slipping land carried a herd of cattle into the creek....Farther on, at Skylands, Fern Gulch was filled with wreckage, redwood trees four and five feet through, a century or two old, having been snapped off like whiplashes. Hinckley's Gulch, a narrow gorge a hundred feet deep, was filled by landslips thrown down from either side, completely burying the Loma Prieta sawmill and nine mill hands to a depth of 125 feet.*²

Jordan published his observations in an article in *Popular Science Monthly*, and the following year he edited a collection of scientific accounts of the quake in a book titled *The California Earthquake of 1906*.

Branner conducted his own extensive field work exploring the geology of the earthquake. Assisted by a team of students, he surveyed and documented the

quake's effects along a nearly 200-mile section of the San Andreas Fault. The data he gathered on a portion of the fault zone near the campus appeared in an influential document, *Report of the State Earthquake Investigation Commission*.³

Branner recognized that the San Andreas rift was an old fault "along which many and great movements have taken place; the rocks have therefore not only been broken across, but they have been crushed, recrushed, and ground up until it is now difficult or impossible to find large blocks close to the fault-line."

To Jordan, however, the causes of earthquakes remained a mystery. Reflecting the state of knowledge and superstition about temblors, he surmised:

*There is no reason to suppose that any planetary conditions produce earthquakes. The conjunction of the planets, even all of them, would produce less variation in strain than the conjunction of the sun and moon that occurs every month....There is no evidence of connection of earthquakes with any kind of climatic condition. The notion of 'earthquake weather' is an absurd superstition....Moreover, it is no longer believed that the wickedness of man produces earthquakes. This has its own reward, but the sin and the penalty are like in kind.*⁴

Soon, however, a new geological theory emerged that began to explain the occurrence of earthquakes. In 1912, at a meeting of the Geological Association of Frankfurt, German meteorologist and geophysicist Alfred Wegener first proposed that continents were actually mobile plates. He was not the first to suggest that the continents had once been joined, but he was the first over an extended time to present substantial evidence from several scientific fields. In 1915, Wegener outlined his then-radical concept of continental displacement, later known

as continental drift—arguably the single greatest advance of geological science. The unifying theory of modern geology, it explains why earthquakes are concentrated at plate boundaries and result from the constant movements of a geologically restless planet.

For years, Wegener, encountered broad hostility to his concept. One of the leading American opponents of his theory was Stanford University Geology Professor Bailey Willis. In 1910, five years before he joined the Stanford faculty, Willis bluntly asserted that "the great ocean basins are permanent features of the earth's surface, and they have existed, where

they are now, with moderate changes of outline, since the waters first gathered."⁵ His strong adherence to the permanence theory placed Willis squarely in the camp

In 1915, German meteorologist and geophysicist Alfred Wegener outlined his then-radical concept of continental drift

opposed to Wegener and his new theory of continental displacement. During the rest of his life, Willis, who died in 1949, did not waver in his view in the face of mounting evidence pointing to continental mobility.

It took more than 50 years, in fact, for geologists to embrace Wegener's concept of plate tectonics. His theory was of fundamental importance for geology, just as the development of the periodic table was for chemistry, evolution was for biology and the discovery of DNA was for genetics. It may be said that the skepticism of Willis and others forced supporters of the mobile continents concept to develop compelling evidence to support their theory, perhaps hastening its scientific acceptance.

Since Willis's time, there has been a prominent history of earthquake research at Stanford. John A. Blume, '33—described as the father of earthquake engineering—was born three years after the 1906 earthquake, which both sets of his grandparents survived, and he personally witnessed the destruction of Santa Barbara in 1925 by a magnitude 6.3 earthquake. As an engineering student at Stanford, Blume worked with Professor Lydik Jacobsen in the 1930s, using a shaking table to analyze the mechanical performance of model architectural structures and construction systems during seismic events. After years as a Stanford faculty member devoted to encouraging the advancement of earthquake engineering research and education at Stanford, Dr. Blume proposed establishing a center for seismic engineering, which now bears his name. Founded in 1974, the John A. Blume Earthquake Engineering Center is located in the historic 1912 building that at one time housed the engineering industrial shop and aerodynamics lab. Researchers at the Blume Center have published more than 100 technical reports, sponsored major national and international conferences, and continue to do pioneering work in the field of earthquake

engineering involving seismic hazard and risk analysis, seismic design methodologies and ground motion modeling to assess damage potential.

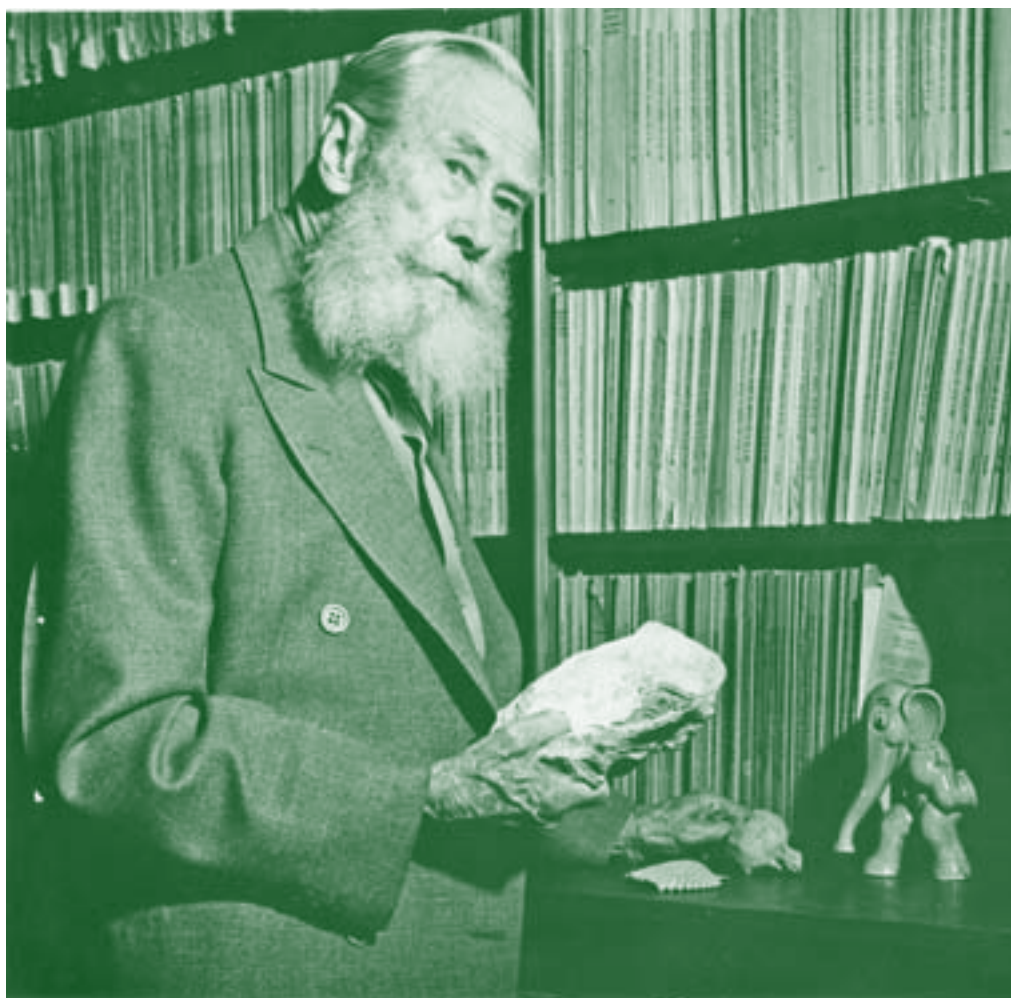
Other leading engineering researchers at Stanford have included Allan V. Cox, who joined the School of Earth Sciences in 1967 and became dean of the school in 1979. The author of more than 100 scientific papers and two books on plate tectonics, Cox pioneered the use of paleomagnetic data in rocks to reconstruct past motions of continental and oceanic plates. Currently, Gregory C. Beroza, Professor of Geophysics in the School of Earth Sciences, is actively researching the physics of earthquake faulting as revealed by seismic waves and explaining how this research can be applied to assess earthquake hazards and predict earthquakes. Over the years, there have been numerous other projects undertaken by many members of the School of Earth Sciences to explore and better understand the geological aspects of earthquakes.

Today, a century after the great earthquake of 1906, scientists better understand the mechanisms that produce seismic events. Earthquake monitoring systems have been expanded, and there have been vast improvements in the engineering design of

STANFORD UNIVERSITY ARCHIVES



An hour after the earthquake, San Jose photographer F. E. Caton took this picture of a caved-in roadway in the Santa Cruz mountains.



Stanford Geology Professor Bailey Willis was one of the leading American opponents of Wegener's theory.

structures to withstand earthquakes. Aside from offering long-term probabilities, however, geologists still have little idea as to when earthquakes may occur or how violent their effects will be. In many ways, Branner's hundred-year-old assessment is still true:

*The only guide the geologist has is the record found in the rocks. This record shows plainly enough that there always have been earthquakes. As for anything more specific in regard to the time and place and violence of future earthquakes, the geologist must leave prophecy to the prophets.*⁶

Tom Wyman, who received bachelor's and master's degrees from Stanford, has a background in engineering and geology. He retired from Chevron in 1992 and is past president of the Palo Alto Historical Association.

ENDNOTES

- ¹ John Casper Branner, "Geology and the Earthquake," *The California Earthquake of 1906*, David Starr Jordan, ed., A. M. Robertson, 1907, p. 65. Branner's article appeared earlier in *Out West*.
- ² David Starr Jordan, "The Earthquake Rift of April, 1906," *The California Earthquake of 1906*, A. M. Robertson, 1907, pp 59–61. This article appeared earlier in *Popular Science Monthly*.
- ³ *The Earthquake of 1906: Stanford University & Environs* (Stanford, Calif.: Stanford University Libraries and the Stanford University Quake '06 Centennial Alliance, 2006), exhibit; *The California Earthquake of April 18, 1906: Report of the State Earthquake Commission*, Carnegie Institution of Washington, DC, 1908.
- ⁴ Jordan, "The Earthquake Rift," pp. 59–60.
- ⁵ Alfred Wegener, *Ensthung der Koninente und Ozeane*, 1915. First English edition *The Origins of Continents and Oceans*, Methuen & Co., London, 1924. Interestingly, Wegener's title closely tracks Darwin's *Origin of the Species by Means of Natural Selection*, which appeared in 1859.
- ⁶ Branner, "Geology and the Earthquake."

Stanford Through the Century

1906–2006

100 YEARS AGO
(1906)

A **major earthquake** awakened the Stanford community at about 5:12 a.m. on Wednesday, April 18. Now estimated at 7.9 on the Richter scale, the 45- to 60-second temblor released approximately 24 times more energy than the 1989 Loma Prieta quake.

Miraculously, only **two died**: sophomore Junius R. Hanna of Bradford, Pennsylvania, and employee Otto Gerdes, on duty at the powerhouse behind the Quad. Gerdes was Stanford's hero. Initially he ran outside, but then rushed back and shut off electricity to campus buildings, sparing the university from fire. He was caught in the collapse of the building's 100-foot-tall brick smokestack. A chimney at the men's dormitory, Encina Hall, killed Hanna when it fell through the roof, carrying him and several others through four floors to the basement. President David Starr Jordan lamented the deaths, but added, "had the earthquake taken

place in the daytime, the loss of life would have been appalling."

Soon after the shaking ceased, residents started wandering the campus in "dumb agony," according to the *Stanford Alumnus* magazine. But one sight produced smiles: the marble statue of nineteenth-century scientist Louis Agassiz had fallen headfirst into the pavement from its perch on the front of the Quad, leading to remarks such as "Agassiz was great in the abstract but not in the concrete." Before long, throngs from neighboring towns came to gawk and some to plunder. Student guards were posted around the Quad; one person was caught trying to steal the face of Christ from the rose window in the fallen church façade. Rumors spread, including one that thugs from the city were supposedly on their way down the Peninsula to loot and murder. Another claimed that inmates from the decimated state-operated Agnews Insane Asylum near San Jose were running wild (in fact, more

than 100 people died there). In response, men were sent to protect women's residences, the museum, and other buildings.

At first, Jordan said classes would resume on Friday, but after consulting the faculty he **suspended classes** until fall semester. Some students lacked money for train fares home; rumors that the university would provide loans proved untrue. Stanford's financial assets were safe in San Francisco and New

STANFORD UNIVERSITY ARCHIVES



Piles of wreckage fill the interior of Memorial Church.



Rubble surrounds the rear of the ruined church.

York, but the treasurer had no cash on campus. Banks throughout the region were closed, and the Wells Fargo and Western Union offices in Palo Alto had no available cash, even if relatives wanted to wire transfers. Jordan suggested that students take trains from San Jose to Stockton or Sacramento, where they could wire home for travel money. But they were also welcome to stay on campus, he added.

Within hours of the quake, adventurous students began making their way to San Francisco to view its damage and the raging fire, search for family members, and offer help. On Friday, in conjunction with a Palo Alto group that had formed the day before, the student body provided hundreds of volunteers to a **massive relief effort** for the city. The *Daily Palo Alto* (predecessor of the *Stanford Daily*) published a list of 22 team

captains, including future Board of Trustees President Paul C. Edwards, '06; future English Professor Edith Mirrielees, '06; and Elsie Branner, '08, daughter of geology professor John Casper Branner. Stanford volunteers were assigned a building at 25th and Guerrero streets in the Mission District as their relief headquarters. The first weeks were chaotic, and when Stanford Chaplain D. Charles Gardner saw that some student relief workers were subsisting on dirty prunes, he set up a stove and cooked for them until the last volunteer left. Other students served with the militia or as deputy sheriffs, assigned to such tasks as guarding railroad bridges.

Jordan quickly appointed a committee of engineering professors and architects to examine campus structures. Three days after the quake, they reported that **damage to academic**

buildings was less than initially thought. The Inner Quad was largely undamaged, as were most of the Outer Quad's one-story buildings. The larger buildings along the front of the Outer Quad were substantially intact, but the four corner buildings and the one-story Physics Building needed repair, as did some shop buildings behind the Quad. The Chemistry Building, near the Oval, lost its chimneys and part of its façade. At Encina Hall, two walls needed to be rebuilt and damage from falling chimneys repaired. Minor damage from falling chimneys at Roble Hall also needed repair. "Our full and detailed examination of

When Stanford Chaplain D. Charles Gardner saw that some student relief workers were subsisting on dirty prunes, he set up a stove and cooked for them until the last volunteer left

the buildings from foundation to roof shows that the actual damage to their stability is less than might be inferred from external appearances," the committee wrote.

As for the **structures in ruins**, the university could function

without them. In fact, the quake was helpful in clearing away several poorly constructed, grandiose edifices, including the unfinished neoclassical gymnasium, the unoccupied neoclassical library, the 10-story Memorial Arch at the Quad's front entrance, and the huge steeple/clock tower atop Memorial Church. The museum's new wings, Palm Drive's entry gates, and the Quad's back arcade also collapsed. Of these, the church was the most lamented. In addition to damage from the steeple's fall, the church façade, with its stained-glass window, had broken free from the roof and fallen into the courtyard. But the building's side walls were standing, and the organ and other stained-glass windows were virtually unscathed.

The *Daily Palo Alto* published special editions on April 18, 19, and 20. The *Quad* yearbook, nearing completion on printing

presses in San Francisco, was destroyed in the fire, which also consumed the April 1906 *Stanford Alumnus* as well as its mailing list. Editors devoted the May *Alumnus* to extensive **coverage of the disaster** and asked alumni "throughout the country [to] help correct the mistaken impression that Stanford is in ruins." In his history of the university's

first 25 years, Stanford Registrar Orrin Leslie Elliott noted that the earthquake was, in retrospect, only an "incident." Aided by Jordan's optimism, according to eyewitness Elliott, the university adapted itself "with surprising quickness and with an agility and light-heartedness happy to see." ❀

— KAREN BARTHOLOMEW

STANFORD UNIVERSITY ARCHIVES



The marble statue of scientist Louis Agassiz fell headfirst into the pavement, leading one wit to observe that "Agassiz was great in the abstract but not in the concrete."

Strong Response to SHS Member Survey

In the realm of survey research, a return of 70 percent is considered very good. That being the case, members of the Stanford Historical Society can take pride in their response to the five-page questionnaire about Society activities that was mailed to their homes last fall. Of the 591 member households, 483 returned the forms, or 82 percent of those queried.

“We’re delighted with the fabulous response from our members,” said Society president Susan Schofield. “We’ve gained some valuable insights into our publications and programs, as well as a better sense of our member demographics and interests. We plan to build on these in the future.”

AVID READERS

The survey showed that 89 percent of the respondents read most or all of each issue of *Sandstone & Tile (S&T)* “sometimes” to “almost always.” Older and long-time members tended to read the publication more often.

Asked to name topics they would like to see covered in future issues, 46 percent selected “campus

homes/buildings,” 40 percent selected “faculty” and 30 percent chose “academic departments/schools.” Sixty-one percent preferred the current S&T schedule of three 25- to 35-page editions a year. More than 100 respondents also offered free-text suggestions regarding topics of interest for future *Sandstone & Tile* articles.

Of the 591 member households, 483 returned the forms, or 82 percent of those queried

A total of 56 percent of the respondents had purchased or read one or more of the Society’s essays or books. As to participation in the Society’s program of lectures, interviews and tours during the past year, a little more than a third attended the lectures or interviews.

Not surprisingly, 64 percent of those members attending were drawn primarily from the campus, Palo Alto and other nearby

communities; half of the campus residents attended at least one lecture in the past twelve months.

Looking ahead, 63 percent of those polled said they were “somewhat likely” or “very likely” to attend one or more Society events in the next year. The majority expressed a preference for either a 4:15 to 4:45 p.m. or 5:00 to 5:45 p.m. starting time.

What steps would encourage members to attend future programs? Fifty-two percent suggested e-mail notifications/reminders and 35 percent cited more advance information about program topics and speakers. The Society hopes to begin e-mail communication soon with members, according to David Voss, Program Committee chair.

ALUMNI, FACULTY AND STAFF

The survey also asked about other campus activities members attended in the past year. Cantor Arts Center exhibits drew 66 percent, Stanford sports, 57 percent; Stanford Lively Arts, 36 percent; exhibits of the University Libraries’ special collections, 27 percent; and Continuing Studies courses, 14 percent.

The Historical Society's web site (<http://histsoc.stanford.edu>) was found to be underutilized, with only 15 percent of the respondents having viewed it in the past year, despite its many offerings.

Sixty-one percent of the respondents are themselves Stanford alumni, and 42 percent are the spouses of an alumnus, faculty or staff member. Current

or former faculty or staff members comprise 48 percent of respondents. These and other categories often overlapped.

Schofield noted that Susan Russell, Director of Survey Research at SRI International, played a major role in framing the survey questions, recommending testing and notification measures to enhance the rate of returns,

and interpreting the results. Russell, who holds three Stanford degrees, contributed her time to the Society. In addition, Miriam Palm shepherded the survey throughout all its phases of notification, distribution, and processing, and Dan Yarlett, a graduate student in psychology, contributed the statistical programming for the survey. ❁

SHS House and Garden Tour

On April 30, the Historical Society will open four vintage campus homes and gardens featured in *Historic Houses III: San Juan Neighborhood*. The houses, which date from 1909 to 1925, and gardens will be open to members from 1–4 p.m.

Architects include Walter H. Ratcliff, Jr, A.W. Smith and Charles Sumner. Information on tickets and registration is available on the Stanford Historical Society web site at <http://histsoc.stanford.edu>, or call 650-326-9212.

STANFORD UNIVERSITY ARCHIVES



The 1912 Mediterranean-style home by Walter H. Ratcliff, Jr., will be included in the SHS Historic House and Garden Tour on April 30.

PAST Celebrates Preservation Month

In May, Palo Alto Stanford Heritage (PAST) is offering docent-led walking tours of historic downtown Palo Alto, Professorville, Lucie Stern Community Center and an Eichler neighborhood or two.

In addition, San Francisco design consultant Paul Duchscherer will give a talk on the California bungalow on Thursday, May 11, at 7 p.m. at

the Woman's Club in Palo Alto. On Friday, May 19, at 7 p.m., Ned Eichler will speak on the Eichler style of architecture at the Lucie Stern Community Center.

On Sunday, May 21, from 4–6 p.m., PAST will present its 2006 Preservation Awards to the newest centennial homes and honor community preservationists. The

event, open to the public, will be held in the gardens of Larry and Vicki Sullivan's 1906 home at 1345 Webster Street.

For a confirmed calendar listing of Preservation Month activities and programs, call PAST's hotline at 650-299-8878 or visit its Web site at www.pastheritage.org. ❁

Earthquake Exhibit Opens at Green Library

A new exhibit, *The Earthquake of 1906: Stanford University & Environs*, is free and open to the public through September 15, 2006, in the Peterson Gallery, located on the second floor of Green Library's Bing Wing.

The exhibit—a project of Stanford University Libraries and

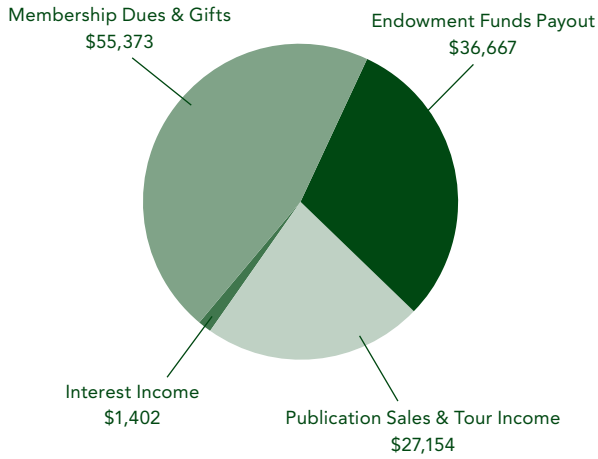
the Stanford University Quake '06 Centennial Alliance—commemorates the disaster with photographs, letters, telegrams, reports, and physical evidence of the quake's impact on Stanford and surrounding communities. It also documents the relief effort and chronicles how the university,

in its twenty-first year, came to terms with the damage and began to rebuild itself.

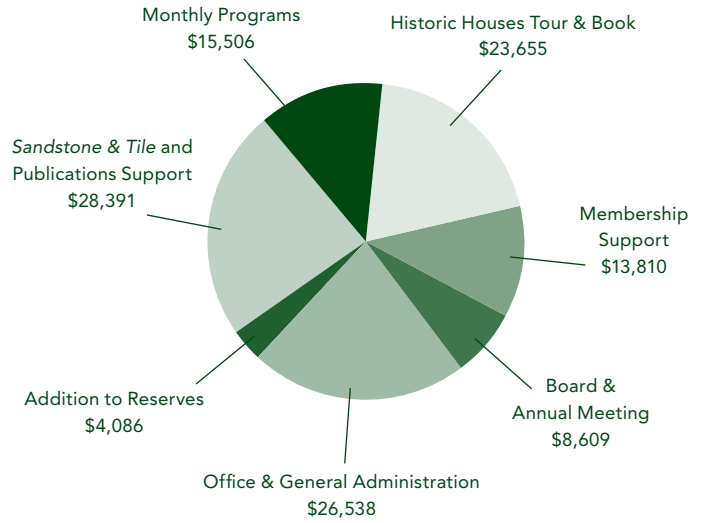
First-time visitors will need to register at the east entrance portal to gain access to the library. For more information and related sites, go to <http://quake06.stanford.edu>.

Stanford Historical Society

Where SHS Operating Funds Came From
 Year Ending August 31, 2005
 (\$120,596)



Where SHS Operating Funds Were Spent
 Year Ending August 31, 2005
 (\$120,596)



Sandstone & Tile

WINTER 2006
VOLUME 30, NUMBER 1

Susan Wels, *Editor*
Annabelle Ison, *Designer*

STANFORD HISTORICAL SOCIETY BOARD OF DIRECTORS

Susan Schofield, *President*
William Stone, *Vice President*
Miriam Palm, *Secretary*
Margaret Ann Fidler, *Treasurer*

Marian Leib Adams
David Daly
Anne Daur
Therese Baker-Degler
Kellie Elliott
Margaret Ann Fidler
Bernard Fraga
G. Robert Hamrdla
Laurence Hoagland Jr.
David Kennedy
Margaret Kimball
Anne Marie Krogh
Carolyn Lougee Chappell
Robert McIntyre
David Mitchell
J. Boyce Nute
Miriam Palm
Kent Peterson
Susan Ward Schofield
Anthony Siegman
William Stone
David Voss

STAFF

Charlotte Kwok Glasser,
Office Administrator
P.O. Box 20028
Stanford University
Stanford, CA 94309
650 725-3332

Email: Stanfordhist@stanford.edu
Office: 3rd floor, Green Library

WEB SITE

<http://histsoc.stanford.edu>

MEMBERSHIP

Membership is open to all who are interested in Stanford history, and includes the following benefits:

- annual subscription to the Society's journal, *Sandstone & Tile*, mailed to members three times a year
- invitations to free on-campus programs on aspects of Stanford history
- member discounts on Society (and some other) publications

Membership Categories

- Current Stanford Student \$10
- Society Member \$50
- Contributing Member \$150
- Supporting Member \$250
- Sustaining Member \$500
- Benefactor Circle \$1,000
- Historian Circle \$5,000

Membership is for one year and is tax deductible to the extent permitted by law. Membership dues are payable by credit card or by check.

To join or renew by credit card, visit our Web site at <http://histsoc.stanford.edu>. Click on the Membership link at the left and then click on the "Make a gift now" link to the Development Office Web site. You may also make out a check to the Stanford Historical Society and mail it to the society office (*see lower left on this page*).

UPCOMING SOCIETY ACTIVITIES

Confirmation of date and notification of time and location will be sent to members shortly before each event.

April 30 Historic Campus Houses Tour

Fall 2006 Great programs being planned—stay tuned!

May 10 Annual Meeting. David Kennedy on the Bill Lane Center for the Study of the North American West



P.O. Box 20028 Stanford University
Stanford, CA 94309

Non-Profit Org.
U.S. Postage
PAID
Palo Alto, CA
Permit No. 28