The sign on the laboratory door says Solid State Horticulture, R.J. Baughman, 5154. It's accurate. Dick Baughman can grow synthetic crystals—rubies, sapphires, garnets, and many lesser known varieties—in his Bldg. 807 lab.

Most synthetic crystals end up in any of several industrial and military applications, not as precious gems (though the techniques for growing crystals for gems are similar). Most common is the wide use of silicon and germanium crystals for transistors and diodes. Other common applications include iron garnets for magnetic devices, quartz for oscillators, ruby for lasers, and quartz and sapphire for strain gages. Dick restricts himself to the kinds of crystals that can't be acquired commercially.

Whether purchased or fabricated, each crystal is generally used in its single crystal form. Single crystals have all of their atoms or molecules arranged in the same repeating three-dimensional pattern. It's not apparent to the eye, but it's this precise order of structural units that makes a single crystal a useful material in research. With a single crystal, for example, it is possible to measure its reaction under stress, or its response if used as a piezoelectric material; the random distribution of atoms in multigrained (non-single) crystals makes their response less predictable and the data are difficult to interpret.

Synthetic crystals, then, are a vital element in materials research. Growing them is a combination of art and science. Although crystal growing (as it is done today) is a relatively new field, the procedures are well defined. A seed (that is, a small piece of the desired crystal) and a nutrient (gas, liquid, or solid) are allowed to react with each other in one of three basic methods—melt, vapor phase, or solution. Dick uses whichever of the methods is best suited to the crystal and its eventual application.

His favorite is a version of the melt method known as the Czochralski technique. First a crucible is filled with a mixture of the material to be grown—the melt, or nutrient. Above it is a seed fixed to a seed holder which can be moved up and down and rotated. Both crucible and melt are heated. The seed is dipped into the melt, then raised slowly. The

(Continued on Page Three)

Test Range Employees Join Las Vegas United Way Effort

For the first time, employees of the Tonopah Test Range Department 9470 who commute to the Test Range from Las Vegas, Nev., have joined the Las Vegas United Way through the payroll deduction plan.

Participation in the United Way totaled 93 per cent of the 44 Test Range employees, according to Jim Deakin (9473) who was the United Way Key Man in the campaign.

Average gift of the Sandians is an impressive $70 annually per contributor.

In addition, two employees who live in Tonopah, where no organized community campaign is conducted, joined the Las Vegas effort.
Afterthoughts

What Language Is That?—The LAB NEWS noontime book sale continues to flourish. We got a donation the other day whose title caught my eye: "Girls of Central High at Basketball," and I opened it half expecting some steamy passages about what really goes on when basketball teams are on the road. Well, it was printed in 1925, and the words look like English, but I'm not sure. A few selections:

"This was Eve Sitz's first important game, too; but the Swiss girl was of a cool and phlegmatic temperament and Laura Bolding, as captain, had no tears for her."

"...so Chet Belding and Lance (sic) Darby, with a crowd of strong-lunged Central High boys at their backs, chereed their girl friends when they came on the field with the very effective school yell..."

"Shoot it here, Laura! I'm loose!" shouted Bobby, whose slang was always typical of the game she was playing.

It's be interesting to work on a contemporary version of the Girls of Central High. Let's see—we'd make the girls' libbers and the guys would be vandalizing the faculty lounge and the big issue would be whether the Gay Lib chapter should get a page in the high school annual...

***

A Certain Distinction—For most of work-a-day humanity, their place of business offers little that is beguiling. After all, one office or shop is pretty much the same as the next. So I read with considerable interest the item in the KAFB Bulletin: "...there have been numerous reports of wild dogs and coyotes being spotted... these animals are dangerous...should not be approached. Now look, add the wild dogs and coyotes to the rattlesnakes and I submit that that's exciting. In New York, almost anyone can get hit over the head going to work. But how many workers do you know that can experience the exhilaration of the pack slowly closing the circle?"

***

Stupefying Development Of The Week—From the Journal: "The National Union of Funeral Service Operatives has declared itself opposed to the use of plastic and cardboard caskets, which it said constitute a 'further lowering of funeral standards.'"

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You Tell 'Em, Vic—"The peculiarity of prudery is to multiply sentinels, in proportion as the fortress is less threatened." Victor Hugo

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Events Calendar

Oct. 28-29 — Albuquerque Children's Theatre, "Canterville Ghost," 1:30 and 3:30 p.m., Popejoy Hall, 277-3121.

Oct. 30 — UNM Faculty Lecture Series, John Aragon, Cultural Awareness Center, 8 p.m., Kiva.

Nov. 1 — ASUNM Lecture Series, Flo Kennedy, Black attorney, active in civil rights, consumerism and women's liberation; 8 p.m., Student Union Ballroom.

Nov. 5 — Council of Albuquerque Garden Clubs presents "Holiday Idea Show," Holiday Inn, East.

Nov. 11-12 and 18-19. This will be a singles, doubles, team event, and all event tournament. SLBA bowlers must bowl in this tournament to be eligible for an annual award. Entries close at 5 p.m. Nov. 3. Contact Bob Janes (5426) or Reba Garrison (1210) if you need a partner for the doubles or want to bowl on a team. *m

Death

Powell (Arky) Henderson, a security inspector in Security Operations Department 3520, died Oct. 11 after a brief illness. He was 52. He had worked at Sandia since February 1954. Survivors include his widow Helen (4151) and a son.

Toastmistress Club Seeking Members

Five Albuquerque Toastmistress clubs are currently observing Toastmistress Founders Month with a number of special activities and a membership drive. Ann McIntyre (5621), active in the Oku Pin Toastmistress Club, invites any Sandia women interested in the Toastmistress program to call her (ext. 2052) for additional details.

Ann is quick to point out that Toastmistress clubs are not auxiliary Toastmaster groups but are part of an independent international organization offering a broad program of communication skills and self improvement.

The local groups are currently involved with planning for the 1973 international convention of Toastmasters to be held in July in Albuquerque. Ann is assistant coordinator for the meeting. Some 900 delegates are expected.

"This is an exciting project for us," Ann says, "and we could use some help. Our programs stress learning leadership skills and community service. Besides that, we have a lot of fun."

Recreation Notes

FUN & GAMES

At the recent SGA(W) Annual Awards Banquet, officers for the 1973 season were elected: Alice Smith (3141), president; Joan Gillon (1200), vice president; Virginia Ramsey (4118), secretary; and Eileen Fitzmoran (7542), treasurer.

Special awards presented were: Molly Ellis (5643), 1972 Association Champion; Pat Anderson (9425), 1972 President's Cup Winner; and Alma Mischke (4152), 1972 Sportsmanship Award.

Sandia Labs bowlers participated in the annual Scotch Doubles "fun" tournament at Fiesta Lanes. Taking top honors were Mary and Vladimir Berniklau (AEC/ALO) with a handicap score of 1271 for the six games. Second place went to Phyllis and Jim Dyer (1312) with 1237, and third place to Marie and John Nakayama (1514) with a 1228.

The Sandia Labs 9th Annual Handicap Tournament will be held at Holiday Bowl on Nov. 11-12 and 18-19. This will be a singles, doubles, team event, and all event tournament. SLBA bowlers must bowl in this tournament to be eligible for an annual award. Entries close at 5 p.m. Nov. 3. Contact Bob Janes (5426) or Reba Garrison (1210) if you need a partner for the doubles or want to bowl on a team. *m
The City Wants To Know

Sharla Vandevender is a systems analyst in Division 1712, but she is also the foremost official proponent of bicycling in Bernalillo County. Sharla is chairwoman of the Bikeway Advisory Committee, a group chartered by the city and county to come up with well documented recommendations about what the local government should do in response to the bicycle boom.

"Bikeways are the obvious answer," states Sharla, "and we see three varieties: the simplest, the bike route which shares auto traffic lanes but is marked 'Bike Route' and uses caution signs such as 'Bike Crossing' or 'Watch For Bicycles' at danger points. Next is the bicycle lane, also on city streets, which is separated from auto lanes by painted stripes or by other physical means—a much safer arrangement for the cyclist. The third type of bikeway would be entirely removed from the street network and consists of a paved path about four feet wide. In Albuquerque, the obvious place for such bike paths is along the top of the banks of our many arroyos and drainage canals."

None of these is likely to become a reality unless the Bikeway Advisory Committee is able to convince the city and county that the public wants bikeways. The survey below (which recently appeared in the Journal) is aimed at both biker and non-biker, and Sharla hopes that enough people will respond to enable her committee to develop intelligent recommendations. So if you missed the survey in the Journal, we suggest you complete this copy and return it to LAB NEWS.

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### The City Wants To Know

**Bikeway Or Not**

**To:**  
**Bikeway Or Not**

**From:**  
**Sharla Vandevender**

Please complete this form, whether you ride a bicycle or not. Your answers will influence the formulation of a bikeway program for the city and county.

1. **Home ZIP code:**  
2. **Your age:**  
3. **Gender:**  
4. **Occupation:**
   - a. strongly in favor
   - b. somewhat in favor
   - c. neutral or unsure
   - d. somewhat opposed
   - e. strongly opposed
5. **Do you have a bicycle?**
6. **Is it registered?**
7. **Do you ride a bicycle?**
8. **How many days a month do you bike?**
9. **About how many miles does your commute trip?**
10. **About how many days a month do you bike?**
11. **About how many miles, average round trip?**
12. **About how many days a month do you bike to work or school, in:**
13. **About how many days a month do you bike to work or school, in:**
14. **Total miles?**
15. **Your commuting destination**
   - a. major thoroughfare
   - b. minor thoroughfare
   - c. on major thoroughfare in city
   - d. on residential side streets or off the street
   - e. on thoroughfare for campus, home, or local
16. **At what percent of your commute trip is there a major thoroughfare?**
17. **Comments:**

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**Followup**

**Bates Kidney Fund**

Couple of issues ago LAB NEWS carried an article about Louise Bates, wife of Gene Bates (3132), who had fallen victim to a serious kidney disease. The Bates family had exhausted the $20,000 health care plan limit and was hurting financially, so a group of friends decided to see if they couldn't raise a bundle to help out Gene and Louise.

Everett Westfall (1415) was one of them, and he came to see me. I told Ev we could certainly provide some coverage in LAB NEWS, but my experience in promoting various causes made me less than optimistic about raising any significant amount of money.

I'm delighted to be able to report that I was totally wrong. These amateur promoters with their garage sale, their tennis tournament, and their arm twisting have accumulated some $5000—fantastic! Everet and his friends decided to see if they couldn't raise a bundle to help out Gene and Louise.

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**Continued from Page One**

**Growing Single Crystals**

new crystal grows at the same rate as the seed in withdrawn.

Growth depends on removing the heat of fusion from the point where the solid, growing crystal touches the hotter molten nutrient. And here's where the art comes in. The shape of the crucible, the amount of melt it holds (the amount is of course diminishing all the time), the type of heating device (and its ability to heat uniformly), the rate at which the seed holder cools, the speed of rotation (necessary to grow a symmetrical crystal) — all of these determine whether the crystal grows in the proper direction, whether it becomes a single crystal (therefore valuable) or whether it becomes a multi-grained crystal. The growing process may take eight hours or even longer.

Single crystals that Dick has grown include: gold aluminum, platinum silicide, arsenic, magnesium mercury, gadolinium gallium garnet, and lanthanum oxysulfide. He has grown crystals as large as a fist and as small as .0003" diameter spheres.

One of Dick's most difficult challenges thus far has been to grow germanium telluride, tin telluride, and lead telluride single crystals. These are difficult to grow because these materials, when melted, vaporize and change composition. Crystals that have positional gradients also have inconsistent physical and electrical characteristics.

Baughman and Bob Lefever (5154 supervisors) solved the problem by using the Czochralski technique with a liquid encapsulating layer of boron oxide (B2O3) in combination with a neutral gas overpressure. This novel combination has proved to be a significant contribution to the field of crystal growth.

In the furnace the B2O3 softened and formed a 5mm transparent liquid layer over the melting compound components, thus sealing the materials inside the growth crucible.

The neutral gas overpressure (50 p.s.i.g.) reduced, in fact essentially prevented, vapor losses during the entire melting and growth period. And several large single crystals of each of the three compounds were the result.

Each completed crystal, whether exotic or common, is in its own way a work of art—a nice blend of science and esthetics. Dick relishes the challenges, looks forward to the greater difficulties in his work that will result from future research in exotic materials.

He has a lot of things growing for him. 

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**Retiring**

Louis Jamme (7611)

Ruth Way (3152)
Livermore Retiree Reunion

"Retirement is fine. I'm enjoying it — definitely." — Hellmuth Woidtke

"Busy working in my yard — already lost 12 pounds, and really feeling good now." — Dan Dewhirst

"Retirement is getting better all the time." — Stan Krell

"Am really enjoying life." — Tony Luna

"Everything is still wonderful. I don't know how anyone can work for a living." — Emily Burkhalder

"Having the time of my life. We're celebrating our 50th wedding anniversary this month." — Glen Thornburgh

"Nothing like retirement — should have done it years ago." — Gus Brockmoller

"I'm really retired — not doing much of anything." — Frank Moore

"Retirement is delightful, wonderful!" — Doris Ward

"It's the only way to go!" — Beth Reece

"Am starting the fourth year of retirement — it's just dandy." — Roy Adams

"Am doing a little of everything, never idle." — Murr Graham

"Can't beat retirement!" — Jake Ludington

"Retirement is fine. Have been traveling a lot — just hooking up the trailer and taking off for a month or so." — Wil Miller

"Working every day." — Jim Culver

"We're having a ball!" — Irv Ellicott
Robert Livermore, First Local Pioneer

This is the fourth in a series of articles by Herbert Hagemann, an eighth-generation Californian, on the early history of the Livermore-Amador Valley. 1972 marks the bicentennial year commemorating the discovery and exploration of the Valley.

Foremost both in name and as a pioneer in the Livermore area is Robert Livermore, a Mexican citizen of Alta California who held the easternmost settlement of Spanish/Mexican colonization in the north.

Livermore was born in 1799 in Springfield, County Essex, England. His father, a leatherworker, moved the family a short time later to a suburb of London where Robert was an apprenticed mason, working at this trade until 1816 when he went to sea on board an English ship. Serving a short time in the American Navy, he was again in British service to experience the battle off the west coast of South America when the Spanish ship Esmeralda was defeated and captured.

In late 1822, Livermore arrived on the California coast aboard an English trading ship, which he presumably left in Monterey harbor to take up residence. Working his way to Pueblo de San Jose, he became acquainted with many of the pioneer families in that area. While serving as majordomo of Rancho Agua Cuíente, just south of Mission San Jose, he met Josefina Higuera, who later became his wife.

Livermore took an early interest in the land of Valle de San Jose, now the Livermore-Amador Valley. Knowing the missions were soon to be secularized, he began a cattle herd on mission land in the Sunol Valley. In 1835, the mission was formally turned over to civil magistrate and the vast pasture lands were opened to civil settlement. The area Livermore called Rancho Las Positas, located east of a line following South Livermore Avenue across the entire Valley, was purchased shortly thereafter by him and his partner, Noriega.

In addition to cattle herds, Livermore planted a sizeable vineyard and cultivated some of his acreage in grains, the first planting of this type in the Valley. In 1837, with the help of Jose Amador, he constructed a large adobe and brought his family to Rancho Las Positas to live. With his location at the entrance to the main pass into the interior, Livermore was host to many travelers, some of importance, others who were seeking rest and shelter as they left civilization on the west coast. During the “gold rush,” Livermore’s Rancho Las Positas served as a hostel and regular stage stop for miners traveling to and from the gold fields.

Rancho Las Positas, containing about 11 leagues of land, was enlarged by the addition of the grant of Rancho Canada de Los Vaqueros. Shortly after title was secured from the Mexican government, Livermore exchanged his interest in Rancho Canada de Los Vaqueros for Noriega’s interest in Las Positas. In 1851, Livermore completed a frame house, the first of its kind in the Valley, next to the original adobe. The adobe was leased to Nathaniel Greene Patterson, who converted it into a hotel.

Seeing a need for more water for the increasing number of people and for irrigation, Livermore began drilling an artesian well to the east of his home. The cost of drilling, the first to be attempted in the area, was $5000, and at the time of his death in 1858, a depth of 800 feet had been reached.

Livermore left a family of 10 children, two of them adopted. After his death, many difficulties arose for the family. His adopted son Jose Livermore, as executor of his estate, was required by law to post bond for $15,000. To secure the cash, it was necessary to sell most of the cattle and mortgage much of the land. To add to this financial burden, the U.S. District Court reviewed the title to Rancho Las Positas, found the Mexican title in order, but reduced the claim from 11 leagues to two leagues of land.

As a result, some 40,000 acres of land was opened up to American settlers, each of whom was granted 160 acres. Much excitement was caused by this free land, and squatters were found occupying land improved and developed by the Livermores, but the Livermores were not allowed to harvest the crops they had grown. The Las Positas title was not settled until 1873 when a patent to the two leagues of land was finally given to Robert Livermore’s heirs. Many of his descendants still reside in the Valley, some occupying parts of the original Rancho Las Positas.

Mike Soderstrand Awarded PhD Degree

Mike Soderstrand has returned to Sandia’s Telemetry Development Division 8182 after receiving his PhD degree in electrical engineering from the University of California at Davis. His thesis was “New Contributions to the Analysis and Design of Active RC Filters.”

Joining Sandia/Livermore in June 1968, Mike worked primarily in the design of active and digital filters for product testers and in computer aided design.

He received his BS and MS degrees in EE from UC/Davis in 1968 and 1969 respectively. His master’s was completed under Sandia’s One-Year-On-Campus (OYOC) program.

Chabot College Film Series Extended to Livermore Valley

Chabot College is extending its 1972-73 Film Series to Livermore Valley with the showing of about half of the internationally acclaimed films at the Amador High School auditorium in Pleasanton.

Offered as part of the College’s Office of Community Services Program, the Film Series is admission free to the public. Showings begin at 7:30 p.m. Adding variety to this year’s Series are musical classics, travel documentaries, and award-winning examples of film as an art form.

At Amador High School Auditorium
Nov. 8, “Epic Voyages of the Ra’s”
Nov. 10, “Stars and Stripes Forever”
Dec. 13, “Mark Twain in Switzerland”
Jan. 17, “China — The Awakening Giant”
Feb. 21, “John Muir’s High Sierra”
Mar. 7, “Pathways Through Literary England”
Mar. 23, “The Red Shoes”

At Chabot College auditorium
Nov. 1, “Lola Montez”
Nov. 22, “Hunters are the Hunted”
Jan. 5, “Romeo and Juliet”
Jan. 10, “Fireman’s Ball”
Feb. 7, “Marat/Sade”
Feb. 9, “The Mikado”
Feb. 28, “Jules and Jim”
Apr. 18, “Ikiru”
May 2, “Children of Paradise”
May 16, “The Entertainer”
May 30, “Death in Venice”

Retiring

John Neuberger (8412) and Dorothy Erickson married in Carson City, Nev., Oct. 7.

Congratulations

To Karl Livingston (8412) for the death of his father in Yorktown, Pa., Sept. 27.

Sympathy

Jim Hay (8256)
Goodwill Is A Good Thing

The woods are full of worthy causes, and they range from the down-and-outer who panhandles you for a dime (make that two bits), to the megabureaucratic charitable enterprises that send you a computerized acknowledgement whose message, while invariably gracious, rings perhaps a little flat.

But suppose one day you decide you want to help people, say people with physical and mental problems, and you want to do this on some significant scale and you aren't a millionaire. What scheme can you come up with that avoids the obvious and overworked frontal approach, i.e., “give me money so that I can help these poor people”? Goodwill Industries has a solution that's rather elegant: they say “give us your discards.”

Consider our affluent, possession-oriented society. The term “garage sale” has entered the language, and it reflects the glut of things we possess but no longer (maybe never did) need. So along comes Goodwill for those who don't care for the trauma of their own garage sale, and they cannily place mail-box-like receptacles all over town so that you can conveniently rid yourself of that heavy winter coat that takes up space in the closet and feel virtuous at the same time. Or old golf clubs. Or that ugly set of dishes from your in-laws. Or the two snow tires. You don't want the stuff, it's too good to junk, and Goodwill is happy to get it because, incredibly but most assuredly, someone out there does want it (if the price is right).

This sort of transaction is good for some $650,000 per year for Goodwill of Albuquerque. We talked with Arnold Pittman, one of the staff of a dozen people who run the organization, about the Goodwill program. We talked at their textile plant on South Edith, and the air smelled of dry cleaning fluid. In the background, piles and racks of clothing and many pairs of shoes. And people: the lame, the halt and the blind — literally. And those with mental difficulties — retardation, anxiety, depression, and other cruel afflictions.

“We usually have about 125 clients,” Arnold stated. As he went on I realized that “client” was a rather nice euphemism Goodwill uses for the people with problems who work there. “A client is referred to us by an agency, say the Division of Vocational Rehabilitation, when that person has progressed to a point where he or she can do work, but not in a competitive situation.” (Competitive=outside world, where you and I work.) “We study the client's history and, depending upon his capabilities, assign him to one of a variety of jobs. He (or she) might work here, for example, as a presser in our dry cleaning plant. Or the client might be assigned to the upholstery shop on E. Central where he would learn how to reupholster furniture.”

Clients are paid for their work, normally put in an eight-hour day, and remain with Goodwill for a month or more. The sale of garments to the public turns out to be a money-losing operation because their renovation — all are cleaned — costs more than the sale price. But the point of the operation is to provide useful work for the client — not necessarily to turn a profit.

While we talked, I watched Joe, a 27-year-old mentally retarded person whom Arnold described as a Goodwill success story. Joe works as a presser, has been with Goodwill a couple of years, and lives by himself in his own apartment. He's self-sufficient. As I watched, Joe smiled toward us, seeming no more or no less content with his lot than the rest of humanity. Arnold noted that “Joe likes his wine,” but then so do lots of people.

At 10 o'clock, the people have a break period and I witnessed a touching procession to their snack bar. An old blind man was led by a mentally retarded young person through the aisles, and others more physically able were helping those who needed help. You might say that good will was the prevailing sentiment.

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Data, specifications. Goodwill has seven retail outlets in the city, look in the white pages. If you have large items to donate or if it's not convenient to use one of their drops, call them and a truck will come by. Although Goodwill is a national organization, each state organization is largely autonomous. Inexplicably, they are not associated with UCF. Do bargains turn you on? Visit something called the U-Fix-It Corral at the E. Central store — the sheer multitude of items you can't possibly use will blow your mind. But they'll make you an offer you can't refuse.
R.S. Claassen (1400), "Materials Science and Engineering and University of Wis., Dept. of Nuclear Engineering, Sept. 7.
C. Peterson and J.F. Reed (both 5646), "The Additive Study Applications of Model Semiconductor Devices, Sept. 12-13; New York City.
The Mexican War — Who Were The Good Guys?

Remember the war with Mexico? About 30 minutes in the high school history class and then teacher rushed into the Civil War and spent the next six weeks talking about the battles of Bull Run.

As far as wars go, the war with Mexico was a shooting war with a big pay off. It didn’t take long — from May 1846 to May 1848 and victory gave the United States New Mexico, Arizona, Colorado, and much of what is now Utah and Nevada.

Santa Anna was the official villain and Texas started it. The not unreasonably Mexican position was that Texas was still a territory of Mexico in spite of Sam Houston and his defeat of Santa Anna for 10 years Texas had been making like an independent nation, repeatedly petitioning the US for annexation. Mexico meanwhile acted as if the act of annexation meant automatic war.

Mexico insisted that the act of annexation meant automatic war. Mexico insisted that the act of annexation meant automatic war. Mexico insisted that the act of annexation meant automatic war. Mexico insisted that the act of annexation meant automatic war. Mexico insisted that the act of annexation meant automatic war. Mexico insisted that the act of annexation meant automatic war. Mexico insisted that the act of annexation meant automatic war. Mexico insisted that the act of annexation meant automatic war. Mexico insisted that the act of annexation meant automatic war.

Nonetheless, Mexico insist...
That's Jack Daniels looking at the scanning electron microscope with Charles Miglionico of Materials Analysis Division 5522. In the office of President Sparks, Congressman Lujan shakes hands with Mr. Sparks while VP Albert Clogston looks on. Both candidates were given briefings on Sandia's mission.

Take Note

Jack Hueter (3134) was recently installed as president of the Kiwanis Club of Albuquerque. He has been a member of the group for 21 years and has served previously in a number of positions. The club has 215 members, was organized locally in 1917.

Gary Shepherd (5428) wants your old Willy Wonka Super Scrunch candy wrappers because UNICEF, the United Nation's children's fund, receives money to provide BCG vaccine for children throughout the world from the manufacturer. Other manufacturers of Kool-Aid, Welch's jams and jellies, Royal deserts, Swift's premium frank, Captain Crunch cereal and Clark and Smile gum are also cooperating in the UNICEF program. The Willy Wonka candy bars are sold in Sandia vending machines. Gary says send him the labels, wrappers, etc., and he'll count, stuff and mail the whole lot. Deadline is Dec. 4. He's in Bldg 880, rm. 113.

A chili con carne dinner, a band concert and a Halloween carnival at Manzano High School Monday, Oct. 30, starting at 5:30 p.m. will benefit the Manzano band fund. The concert will start at 7:30 p.m. Tickets are on sale at the door or from Dallas Sasser (1734).

Some say there's no accounting for management. The eighth annual attempt to prove them wrong, also known as the Eighth Annual New Mexico Accounting and Management Seminar, gets underway at 8 a.m. on Nov. 17 at Ramada Inn East.

Professional people from New Mexico's business and financial worlds will discuss their social responsibilities to the public. Some of the meetings sound fascinating—"Body Language," "Banking's Social Responsibilities vs. Business Goals," etc. And then there's "New Audit Standards Prepared by the General Accounting Office." A pair of Jacks from Sandia are on the program — Jack Hueter (3134) is the MC; Jack Tischhauser (5420) will discuss "Social Responsibilities of the Computer Professional."

For more information, contact Mike Coleman (4154) or Fred Mitchell (4152); both are members of the National Association of Accountants, one of the event's co-sponsors.

If THIS were a folksy publication, we would call this "Photolithographic Strippers: Helen Allen Edith Best.

In recognition of Albuquerque's outstanding support of the U.S. Savings Bond campaign, Glenn A. Fowler (left), Sandia vice president and state chairman of the Savings Bond program, presented the Department of the Treasury's Take Stock in America award to James E. Kilborn, vice president and general manager of N.M. Mountain Bell and chairman of the Albuquerque Bond drive, during a luncheon meeting recently. Jesse L. Adams, national director of the Treasury's Savings Bond Division, addressed the meeting attended by bankers, employers and other volunteers. This year's goal of 9200 new participants and increased savers was exceeded with 9702 enrollments at the end of September.
AT THE FINISH LINE, the yacht with Al Quant is ahead by a nose (a prow?). The boat is almost hidden by the third-place finisher.

THE GOLDFIELD served as hospitality suite for the race. The ancient schooner was dismasted in a storm off Guaymas a year ago, but is soon ready to resume its journey from Colombia to California.

Says Al Quant

Lewis Carroll was Wrong

There are certain things — as, a spider, a ghost, The income-tax, gout, an umbrella for three — That I hate, but the thing I hate the most Is a thing they call the Sea.

— Lewis Carroll

Many Albuquerqueans would agree — that's one of the reasons they like it here. But not all. Al Quant (5513) for one. He and four other Albuquerqueans not only own a yacht, they sail it. They not only sail it, they race it. And they not only race it, they place.

The five entered it in the 25-mile Second Annual Salt Water International Yacht Sailing Race from San Carlos to Guaymas Harbor on the Sea of Cortez on Columbus Day, and they came in second in a photo finish over 19 other yachts. Their boat, a 25-foot Coronado sloop ignominiously yclept Toad, is capable of sailing the bounding main; it has a four-foot keel (see glossary) and with its ballast (see it again) weights 6000 pounds.

But the crew and captain (they take turns) made two decisions which proved wise. First, they used their spinnaker (glossary again), a move which by race rules carried a five percent time penalty but which increased their speed considerably. Second, they hugged the shore — trickier sailing but fewer miles to cover compared with the open sea where most of the big (up to 70 foot) boats were sailing.

Though a hurricane had swept the area just a few days before the race, the winds were good — 15 knots (glossary again) or so. And the race itself went without mishap — no one walked any planks, said "avast there, me hearties," or got seasick.

After the race there was a victory celebration aboard an ancient 110-foot South American schooner, the Goldfield. And from the schooner was hurled the Toad's captain pro tern. It wasn't a mutiny, just one of those quaint customs.

Al awaits, albeit with apprehension, his turn to be skipper. Captain Quant has a vague Caine mutinish quality about it. But he's ready. He learned sailing as a lad in Chicago, then polished his technique (and a few fittings) when in the Sailing Club at Massachusetts Institute of Technology. He's been sailing at Elephant Butte for 15 years — except of course for his 40 hours a week at Sandia. He'll command a tight ship.

Glossary:

keel — a timber extending from stem to stern (that's front to back) along the center of, and projecting below, the boat's bottom; often named Howard.

ballast — a heavy substance used to maintain proper draft or trim and to increase stability; retired galley slaves are no longer considered good form for this purpose.

spinnaker — the word probably comes from Sphinx, a yacht of the 1860's; it's a large triangular sail set on a long light pole (not a lightpole) on the side opposite the mainsail and used when running before the wind (while working before the mast).

knots — one knot is one nautical (knotical?) mile per hour; a nautical mile is 6076.11549 feet, roughly.

Speakers Abroad

The following papers, prepared by members of Division 5131, were presented by Lee Davison, supervisor of Explosive Physics Division 5131, at the JOWOG-9 17th Meeting, A.W.R.E., Sept. 23-29, Aldermaston, England:

Medical Reporter

George Williams Serves on State Comprehensive Manpower Council

George Williams, a programmer in Product Data Systems Division 5413, is a member of the Comprehensive Manpower Council for the State of New Mexico. Created a year ago by Governor Bruce King, the Council is charged with the responsibility of coordinating federal job training programs in the state. Some $4 million in federal funds are spent in the state annually on job training programs.

As the only Black on the Council, George is most concerned with the Black unemployment rate. He represents the NAACP.

George is currently involved in the Black unemployment problem in the southern part of the state, Deming in particular. He recently completed a study of the Deming problem and presented the results of his investigation to the Council:

"Black unemployment in Deming is officially 50 percent," George says, "but if part-time and odd jobs are considered as unemployment, the rate ascends to 67 percent." Through his position in the Council, George is working to help the situation.

Promotions

John J. Aragon (1214) to Staff Assistant Technical
Hermenes J. Baca (4514) to Laborer (Leadman)
Ronald G. Cheek (7135) to Technician (Component Quality Testing)
Gardner B. Green (4515) to Janitor (Cleaning & Polishing)
Wallace A. Hunt (4611) to Staff Assistant Technical
Estrella M. Lopez (8217) to Secretary (Trainee)
William M. Rago (6296) to Administrative Clerk
John W. Roncerio (4515) to Janitor (Cleaning & Polishing)
Rosendo Saavedra (1824) to Staff Assistant Technical
Vinita H. Sankey (8220) to Secretary
Elmer G. Smith (4515) to Janitor (Cleaning & Polishing)
Russel F. Smith (7122) to Electroplater
Theresa M. Smith (8217) to Secretary
Lindu J. Stobie (8217) to Secretary
Shirley Y. Young (8217) to Secretary (Trainee)
Susan M. Davenport (1722) to Member of Technical Staff
Paul C. Kind (4518) to Laborer (Leadman)

Sympathy

To Martin Gonzales (4518) on the death of his mother-in-law, Oct. 10.

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Catching a Cold? Maybe It Was a Draft, Maybe Not

Some people believe that wet hair, cold feet and exposure to drafts bring on a cold. Others object to this as myth or folklore. A few studies into the causes of colds have sided with the scoffers, especially since no study has shown that exposure to inclement weather will result in a cold.

However, the studies have not been that numerous: the common cold isn't exactly an area of overwhelming interest to medical researchers.

Becoming ill with an infectious disease like a cold involves two factors:

1. Exposure to the infectious agent; and,
2. The level of internal resistance to that infectious agent. Because the second factor is highly variable, generalizations regarding infections are suspect.

The first factor is obvious. You must be exposed to the infecting organism before you can get an infection. Even the "draft-cold feet" people admit that. If there are no significant viruses or bacteria in the nose or throat and no exposure to anyone having such infectious organisms then all the drafts in the world will not cause an infection. Infections always result from the union of the bug and you.

Now we come to the more complex second factor mentioned above. the level of internal resistance. It is well-known that under normal circumstances one cannot get second attacks of measles, mumps or chickenpox. Therefore, intimate contact with people infected with one of these viruses usually will not result in a second infection.

These conditions are virus illnesses — as is the common cold. Although there is no certainty, there is some medical evidence that once a person has been exposed to a virus illness he will have a lifelong immunity to it. The reasons people keep getting influenza (which is a virus infection) is because the virus itself keeps changing and there are many "cold" viruses which produce the same symptoms of sneezing, coughing and runny nose. It may be true that even in the area of colds one doesn't catch the same virus twice.

There is more to the problem of resistance than specific protection from previous exposure. It is fairly well accepted medically that once a person has fully recovered from a cold, a period of weeks, or even months, may go by during which his resistance to other colds is high. This is true even though some of the viruses he is exposed to are new and, theoretically, ones to which he should be susceptible. The reasons for this may have to do with certain blood constituents (such as interferon and others), an area about which little is known.

At least one other important factor in resistance, a non-specific one, is the various levels of hormones, especially cortisone-like hormones, in our bodies. It is well known that when a patient is given cortisone for prolonged periods of time his resistance to infections decreases. The human body constantly produces cortisone-like hormones. The delicate balance of hormones is a non-specific but probably significant factor in determining resistance.

We know the body makes extra cortisone in response to stress, and it may be here that folklore and medicine meet. Thus, for those persons whose bodies react to cold feet or drafts as stressful situations, there may be an increase in cortisone output which could lower resistance to infection. But this is pure speculation.

All we do know is that the patient must be "ready" for infection before it develops. There might even be psychological factors involved but this also is speculation. Who knows? Some future study may reveal that if you believe a draft will hurt you, it will and if you don't, it won't.
MILEPOSTS
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Joe Garcia - 4512

Robert Martin - 1313

Gerald Kroth - 9321

Ralph Holland - 4518

Charles Trauth - 1741

T. J. Tucker, Jr. - 5131

Richard Swinigian - 7434

Floyd Philgreen - 7114

Fred Delibor - 7652

J. O. Philips - 1554

Richard Swinigian - 7434

Ken Sarason - 1651

T. J. Tucker, Jr. - 5131

Gilbert Wallace - 7114

Dave Braudaway - 7452

Fred Delibor - 7652

J. O. Philips - 1554

Stanley Eastman - 4611

Robert LaChance - 5315

Fred Delibor - 7652

J. O. Philips - 1554

Stanley Eastman - 4611

Robert LaChance - 5315
A FUNGUS SUPPLIER? Or maybe a gigantic mobile goey dessert? Whatever, it was parked in Visitor’s lot.

CLASSIFIED ADVERTISING
Deadline: Friday noon prior to week of publication. Advertising rates are as follows:
A maximum of 125 words will be accepted for free.

RATES
Limit: 20 words.
1. No pets or plants.
2. Must be formatted in 2 columns.
3. Include name and organization.
4. No more than one advertisement per individual or company.
5. Include name and organization.
6. Maximum of 125 words.
7. Include name and organization.
8. Maximum of 125 words.
9. Include name and organization.
10. Maximum of 125 words.

FOR SALE
MINIATURE 2 EARLY SKIS, 10 TV, Admiral AKC Airdale Terriers, born each issue.
2. No commercial ads, please
1. Limit: 125 ads, please

JUNK
A SNOW TIRES, couch, $40. Garst, 299-5870.
Includes seat, $8; chest waders, never purebred, spayed
Chevrolet attachments, $15.
Sling, vinyl room suite, $40. Detorie, 299-1868
braided rug.

SNOW TIRES, couch, $40. Garst, 299-5870.
Includes seat, $8; chest waders, never purebred, spayed
Chevrolet attachments, $15.
Sling, vinyl room suite, $40. Detorie, 299-1868
braided rug.

TRASH
TRASH

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SOL
Coronado Club Activities

Beware the House of Horrors

TONIGHT at Happy Hour the Club's kitchen staff will wheel out a fantastic oriental buffet while Sol Chavez and the mighty Duke City Brass make the happy music. Adults pay $1.75 for the buffet, kids $1.50. Special bar prices (cheap) will be in effect until 10 p.m. Denny Gallegos will entertain in the main lounge from 9 until midnight. Next Friday, Nov. 3, the Club's famous chuckwagon roast beef will top the buffet menu while Frank Chewiwie will play for dancing. Yolanda Adent will hold the main lounge. On Nov. 10 the Prisoners will be loose on the bandstand and barbequed chicken will be the buffet spread.

HALLOWEEN at the Coronado Club will be spectacular. Designed for kids, the party will feature a house of horrors with a cast of characters out of a nightmare. In addition to assorted witches, spooks, goblins and ordinary devils, Frankenstein and Igor will have their special lab, the Mummy will emerge from his tomb, the Phantom will creep, Dracula will seek soft necks, the Wolf Man will watch out for a full moon, and King Kong Jr. will be loose. There will be bobbing for apples, tricks for everybody and lots of treats. Prizes will be awarded for the best costumes in several categories — age 4 and under, 5 to 7, 8 to 10 and 11 to 12. In addition, the original “Wolf Man” movie starring Lon Chaney will be shown. The screams start at 6:30 p.m. next Tuesday evening and the party's free to members, but members only please.

* * * *

FAMILY VAUDEVILLE NIGHT

Nov. 18
Movie & Magic

ANOTHER BIG EVENT this month is the lobster dinner set Saturday, Nov. 11. Live Maine lobsters are flown in special for the party and you get the works — king crab cocktail, baked potato, salad and hot apple pie. Before the dinner, the Mateus people will provide a wine taste and after dinner the Ken Anderson quartet will play for dancing. Tickets ($7 members, $8 guests) should be picked up by Nov. 3.

* * * *

TEENAGERS can dance or whatever to a group called Ghost Rose on Saturday, Nov. 4 from 7:30 to 10:30 p.m. Member parents should pick up tickets for their youngsters.

* * * *

THE FOOTBALL BUS will leave the Club at 1 p.m. on Saturday, Nov. 4, and go directly to the stadium where the Lobos will face San Jose State. Members can ride the bus free, leave their cars in the Club parking lot and return to the Club after the game.

* * * *

HERB PITTS (100), Club publicity director, has a $5 bill for the person who can come up with a fancy name for the Club's basement room 5, next to the Eldorado room. Winner will be announced in mid-November.

* * * *

THE CLUB LOUNGE will be closed until 7 p.m. on Tuesday, Nov. 7, while you go to the polls and vote.