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# SHOWBOAT

**MOVIE RATINGS**  
 The objective of the ratings is to inform parents about the suitability of movie content for viewing by their children.  
 (G) - ALL AGES ADMITTED  
 General Audiences  
 (GP) - ALL AGES ADMITTED  
 Parental Guidance Suggested  
 (R) - RESTRICTED  
 Under 17 requires accompanying Parent or Adult Guardian

**FRI.** 11 February  
 "BLACK BEAUTY" (106 Min)  
 Mark Lester, Walter Slezak  
 (Action Drama) Excellent screen adaptation of classic tale of a colt that becomes the property of gypsies, is sold to the circus and then becomes an Army horse. The family film ever you want. (G)  
 "HOT TO RIDE A HORSE" (7 Min)  
**SAT.** 12 February

**-MATINEE-**  
 "THE OUTLAWS IS COMING" (89 Min)  
 Three Stooges  
 "WILLIE THE KID"  
 "THREE LITTLE PIGS"

**-EVENING-**  
 "TAKE THE MONEY AND RUN" (85 Min)  
 Woody Allen, Janet Margolin  
 (Comedy) The kookiest put-down you ever saw with Woody an inept criminal, a cross between a retarded Clyde Barrow and a butterfingers Cool Hand Luke! Fast paced with a gag a minute. A sidesplitter! (GP)  
 "DIXIE GOLF TRAIL" (115 Min)  
**SUN.** 13 February

"2001: A SPACE ODYSSEY" (141 Min)  
 Keir Dullea, Garry Lockwood  
 (Science-Adventure) So realistic, you'll feel like YOU are with them exploring space, and approaching Jupiter for man's first visit. Years ahead of its time, controversial and completely engrossing. DON'T MISS! (GP)  
**NO SHORT SUBJECTS**

**MON.** 14 February  
 JUILLIARD STRING QUARTET  
 Presented by the China Lake Civic Concert Association.  
**TUES. & WED.** 15-16 February

"A MAN CALLED SLEDGE" (91 Min)  
 James Garner, Dennis Weaver  
 (Western) 40 riders protected the miner's gold wagon on its two day trip to the assay office, but Sledge had a scheme, one so crazy that it just might work! Rip-snortin' action of the Old West. (R)  
 "PINK SPINX" (7 Min)

"GET WET" (9 Min)  
**THURS. & FRI.** 17-18 February  
 "THE BATTLE OF BRITAIN" (132 Min)  
 Michael Caine, Harry Andrews  
 (Action-Adventure) Classic, star-studded WWII spectacle authentically traces the RAF's uphill battles against a superior Luftwaffe at the start of the war. The London Blitz, channel dogfights, etc. (G)  
**NO SHORT SUBJECTS**



**HUSBAND AND WIFE TEAM**—William and Annie Blanc look over the score of "Mame," the spring production of the Community Light Opera and Theater Association (CLOTA), to be directed by Blanc. Tryouts for this lively musical, based on Patrick Dennis' best-seller, "Auntie Mame," will be held on Feb. 22, 23 and 24 at 7:30 p.m. at the CLOTA hangar, located at the corner of Upjohn and South China Lake Blvd. in Ridgecrest. Director Blanc urges all potential actors and actresses, plus backstage personnel, to audition for the play. An early recruit, Mrs. Blanc will help with makeup for the show.

## Motorcycle Riding Safety Course To Start Saturday

A motorcycle safety class, sponsored by the China Lake Community Council and members of two local motorcycle clubs (the Sandblasters and the Gypsy Wheels) will begin at 9 a.m. Saturday in the NWC Traffic Safety Building, located at the corner of Nimitz Ave. and Hussey Rd.

The course is being offered as a community service for local residents who are either now riding or planning to ride motorcycles, and would like to know more about the machine and the skill needed for its safe operation. Up to 20 persons can be accommodated in each class.

Saturday's classroom session will be three hours in duration. It will be followed up on subsequent Saturdays by motorcycle riding skill tests that will be held in the Satellite (dry) Lake area of the Naval Weapons Center.

At the first class session on Saturday, release forms will be issued to all prospective students and must be signed by both parents of any minors enrolled in the course and by any adults in attendance before any motorcycle riding is done.

Motorcycles for use by those attending the class will be provided by Ridgecrest Cycle, Inc., the B&B Cycle Center and the Desert Sport Cycle Shop. In addition, approved helmets that must be worn by class members while riding 'cycles have been furnished by the Buco Corp. and Daytona Products.

Inexperience on a motorcycle is the cause of many accidents, spokesmen for the NWC Safety

## Museum Now Has Display Of Art From Congo

A special exhibit of ethnic art of the Congo is on display at the Maturango Museum. The exhibit is part of the satellite museum program of the Museum of Cultural History at UCLA.

Some of the articles displayed are knives of wood, iron and zinc; masks used in secret initiation ceremonies; cosmetic boxes; wooden cups; and headrests which are used by the women to protect their hair-dos while sleeping.

These articles are used by the Kuba, a group numbering 75,000 who live in the central Congo region. Largely an agricultural people, they supplement their diet by hunting and fishing.

The Kuba are fine blacksmiths and their art emphasizes geometric decoration. A mat, woven of raffia, immediately attracts the viewer to the display window and there is a strong geometric design in tans and browns.

Visitors may view this special display at the Maturango Museum on weekends between 2 and 5 p.m.

"OH, GIVE ME A HOME . . ."—For a week at camp, anyway. That could be what Ann McCubbin, left, and Pat Noland are singing, as they warm up for the talent night auditions for this year's performance of the "Fractured Follies." The annual musical revue will benefit the IWV Campership Fund, which sends needy children to camp each summer. The revue will have a Western flavor this year, reports the chairman. All Valley residents are invited to the auditions that will be held on Tuesday night, beginning at 7:30, at The Hideaway restaurant in Ridgecrest.

## Auditions for 'Fractured Follies' Set Tuesday Night

Auditions for the "Fractured Follies" musical revue will be held at 7:30 p.m. Tuesday at The Hideaway restaurant in Ridgecrest, according to Ann McCubbin, chairman of the event.

An open invitation to participate in the '72 Talent Night has been extended to all Valley residents. The annual show is planned as a benefit for the Indian Wells Valley Campership Fund.

Singers, dancers and actors of all sizes, shapes and talents are needed to complete a cast of over 100 for the musical comedy show, which will have a Western theme this year.

Costumes, music and script will be provided by the Jerome H. Cargill producing organization, of New York, which also will supply a professional director. The latter will be on hand Tuesday evening to select the cast.

Rehearsals will begin Feb. 16 and continue each weekday and evening until the first performance on Friday, March 3, at 8 p.m. at the Burroughs High School Lecture Center. The show will repeat on March 4.

According to members of the China Lake PTA, co-sponsors of the show, arrangements have been made for both daytime and evening rehearsals in order to accommodate persons who would be unable to attend evening rehearsals only.

Daytime rehearsals will be held in the Station Theater, and Murray School's auditorium will be the site of the evening rehearsals.



**SEARCH AND RESCUE TEAM ELECTS 1972 OFFICERS** — Officers of the IWV Search and Rescue Team for 1972 elected recently by the membership pose for an official photo. They are, l-r, Bob Wilhelm, surface lieutenant; Gary Peek, underground lieutenant; Fred Camphausen, secretary-treasurer, and Sam Wyatt, elected for a second term as team captain. Kern County Sheriff's Department regulations provide that four team officers be elected to act as liaison between the team and the department, and to be in direct charge of the team during its surface and underground (mine) search operations.



Naval Weapons Center  
 China Lake  
 California

Vol. XXVII No. 6



**TOP OFFICIAL BRIEFED**—The Honorable Robert A. Froesch (second from left), Assistant Secretary of the Navy (Research and Development) was welcomed by a group that included Rear Adm. W. J. Moran (in center), Naval Weapons Center Commander, and H. G. Wilson (right), NWC Technical Director, upon his arrival here shortly before noon Tuesday. Others on hand to witness the arrival of Dr. Froesch were Dr. W. B. LaBerge (at left), Deputy Technical Director, and Capt. C. "Tex" Birdwell (hidden at right), Commanding Officer of Air Test and Evaluation Squadron Five. The first stop for Dr. Froesch, who was here to familiarize himself with the many research and development programs that are under way at the Naval Weapons Center, was a display in Hangar 3 at the Naval Air Facility. Accompanied by Capt. Frank Grambell, his executive assistant and Naval aide, and by Ernest J. Zellmer, Special Assistant to the Secretary of Navy, Dr. Froesch attended briefings and inspected numerous items of hardware until his departure for Los Angeles at 11 a.m. Wednesday. Other photo coverage of the visit by Dr. Froesch can be found on Page 4 in this issue of The ROCKETEER.

## HEW Approves Construction Of Handicapped Children's School

Welcome news that officials of the U.S. Department of Health, Education and Welfare have approved the construction of what may well turn out to be a model educational facility for handicapped children has been received by administrators of the China Lake Elementary School District.

Whereas the initial discussion on a possible school for exceptional children had been in terms of a 6,000 sq. ft. building, what has now been approved, according to Gerald Cherry, HEW's Chief of School Assistance for Federally Affected Areas, is a structure more than three times that size having a total square footage of 20,000.

The need for the much larger size building was discussed here a month ago at a meeting of state, county and local officials who are involved in programs for handicapped children, and was then confirmed in a report submitted to HEW officials by Beatrice Gore, a representative in the special education field for the California Department of Education.

At the Jan. 11 meeting, arranged by the China Lake Elementary School District, Grant Pinney, assistant superintendent in charge of business, began the discussion with a summary of the problem by noting that it had been a dream of his for about five years to see developed here a valleywide center for all handicapped children who require therapy and other special services to meet their educational needs.

What was asked for and has now been approved by HEW officials in Washington is a school for exceptional children that will include two classrooms for the deaf and one classroom each for multi-handicapped, trainable mentally retarded, aphasic, and visually-handicapped youngsters.

In addition, there is to be a developmental center where handicapped children can begin their training at an earlier age than is the case with most other school children, and 10,000 sq. ft. of the new building will be designed

## Staff Offices Of Security Dept. To Be Relocated

A temporary relocation of the Security Department's staff offices will become effective next Friday, Feb. 18, it was announced this week by Lt. Cmdr. R. M. St. Germain, department head.

During the time that remodeling work is under way at Building 879 (formerly the brig), staff offices of the Security Department will be located on the second floor of the Housing Building (No. 35).

Situated there will be the offices of the head and associate head of the Security Department (Codes 84 and 8401), the Classified Management Program Office (Code 8402), and the Security Department's administrative assistant (Code 8403).

Present telephone extensions for all four offices will remain the same.

## Lunar Seismic Grenade Launcher Uses NWC Developed Propellant

Approximately eight months from now, a lunar seismic grenade launcher, placed on the moon by the Astronauts of Apollo 14, will fire seismic grenades across the lunar surface to measure shock waves, which will in turn be transmitted back to earth by the Apollo Lunar Surface Experiments Package (ALSEP) radio-link communication system.

The propellant used to launch the grenades is PL 6670, developed by the Propulsion Development Department at the Naval Weapons Center.

The 3-inch diameter spherical motor used small wafers of propellant with a "screen" retainer attached to the nozzle to achieve very short burn times with relatively high impulse. The SOS motor design incorporates some of these features. Space Ordnance Systems was supplied with PL 6670 propellant extruded as small strands on the Center's 1 in. and 3 in. presses, under the direction of Elmer Rbyn.

When the motors are ignited on the lunar surface, they will propel the "grenade" up to a range of one mile. The explosion is transmitted through the ground, and then the equipment picks up the signal and by repeated signals (several grenades) at different locations, NASA can then validate calculations of the moon soil's seismic properties.

The grenade launcher assembly was set up in proper launch position by the Astronauts of Apollo 14. NASA explained that the delay in launching the grenade was necessary because several other experiments will be conducted in

Throughout its stay."

The Houston Manned Space Center facility of NASA invited the Center to participate in the ALSEP program in 1966. This participation by Vetter's group involved the recommendation of PL 6670 propellant, as well as a presentation of designs and results of a small project called "8 Ball." The latter was the name given to a rocket propelled shaped charge warhead that was launched using a bazooka-like tube.

According to Ron Vetter, of the Propellant Systems Division, PL 6670 has especially good thermal stability, and this was one of the main reasons for its selection by Space Ordnance Systems Inc. (SOS), El Segundo, Calif., developers of the grenade launcher. According to an article in the Jan. 1, 1968, issue of Aerospace Technology, the motor (of the launcher) required either a propellant with an extremely fast burning rate or one configured with a very thin web so it would burn in a very short period and still produce the required performance curve.

"Since the only propellant that could meet the environment criteria did not have the required burning rate, SOS used one available in an extruded cylindrical shape about the size of a pencil and sliced it into wafers to produce a lot of propellant surface," the magazine article continued. This was the Naval Weapons Center's propellant PL 6670.

"The binder of our propellant is a fluorocarbon elastomer," explained Vetter. "This produces a propellant which is sufficiently stable to withstand the environment on the moon for an extended period. The moon's temperatures vary from -250 degrees F to +250 degrees F. The lack of an atmosphere on the moon also means that the grenade is subjected to a complete vacuum

## New Wage Rates Set for Trades, Labor Employees

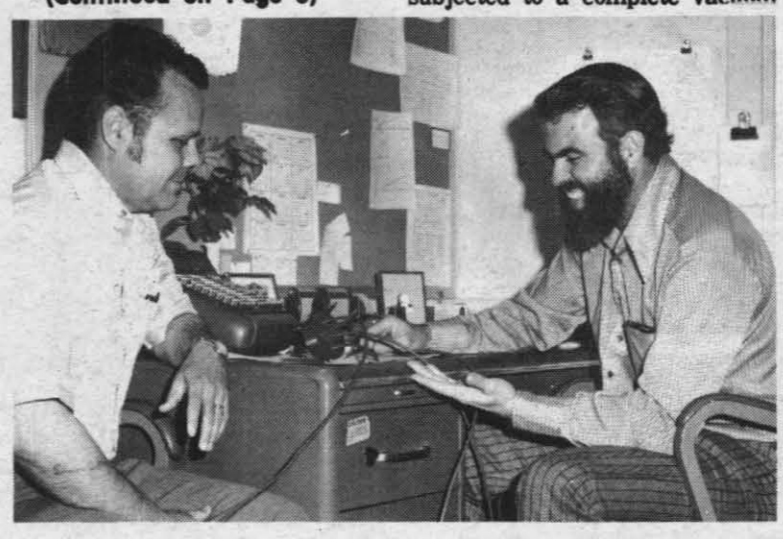
The Naval Weapons Center has received word from the Department of Defense Wage Fixing Authority reflecting Mojave Desert new wage rates for trades and labor employees at China Lake.

The wage increase will be 5-1/2 per cent for all wage employees. Typical step-rates are:

Non-Supervisory WG-10 Step 2 \$5 per hour  
 Leader WL-10 Step 2 \$5.50 per hour  
 Supervisory WS-10 Step 3 \$6.50 per hour  
 Printing and Lithographic Non-Supervisory WP-8 Step 2 \$4.49 per hour

The shift differentials will be: 2nd shift, 18 cents per hour and 3rd shift, 37 cents per hour. The Schedule of Wages for Trades and Labor employees is currently being up-dated to reflect this change.

The new pay rates became effective on Feb. 6.



**MOON ROCKET PROPELLANT**—Elmer Rbyn (left) and Ron Vetter look over a 3 in. extrusion press multipost die used to form propellant strands, which were in turn used in the small launchers placed on the moon. The long strands that are produced are eventually sliced into small pieces.

From \_\_\_\_\_

TO \_\_\_\_\_

PLACE STAMP HERE



## Victory Keeps Lions Alive In Basketball Title Race

The Loewen's Lions stayed alive in the race for the title in China Lake basketball action this week by downing the VX-5 hoopsters, 59-42. The Lions are presently tied for first place with the Cerro Coso and Ace TV teams. Each squad has only one loss in league play.

The tall and talented Lions were momentarily surprised by the energetic defense play of the Vampires in the opening period, as the VX-5 cagers owned a slim 8-7 lead at the end of the first stanza. However, hot-shooting Gary Ziegler came off the Lions' bench in the second quarter and scored 14 quick points to help move his team into a 6 point half-time lead, 28-22.

After the intermission, the Vampires' shooting ability went down the drain and they tallied only 7 points in the third period against a respectable 14 markers for the Lions.

Ziegler's 18 point outburst was high for the night, and he received substantial help from eight other Lions who hit consistently from the field throughout the game.

Action in the B league was fast and furious this week as the Desert Campus Pioneers and NWC both picked up victories at the expense of the Valley Stars and the Dispensary, respectively.

## League To Make Second Attempt At Organization

A second attempt to elect officers and set up the organization necessary to operate the Indian Wells Valley Pony-Colt Baseball League during the 1972 season will be made at a meeting to be held next Wednesday, Feb. 16, starting at 7 p.m. at the Las Flores School in Ridgecrest.

Because only seven persons, counting four present officers, (Continued on Page 7)

The campus cagers were never seriously threatened by the Stars as they burst into a 29-11 halftime lead and then continually widened their margin after the halftime break. A strong 22-point fourth quarter gave the losers a boost, but it was a case of too little, too late as the Pioneers raced on to a 15 point decision, 65-50.

NWC's balanced offense and strong bench proved to be more than the Dispensary cagers could handle as NWC snared a 60-43 win Tuesday night. Four players hit double figures for NWC. Gary Pottiger's 16 points led the pack and Phil Kinnamon netted 13, while Tom Thompson and James Brown garnered 11 each.

In last week's play, the Odds and Ends, Continental Telephone and NAF each added another victory to

(Continued on Page 7)

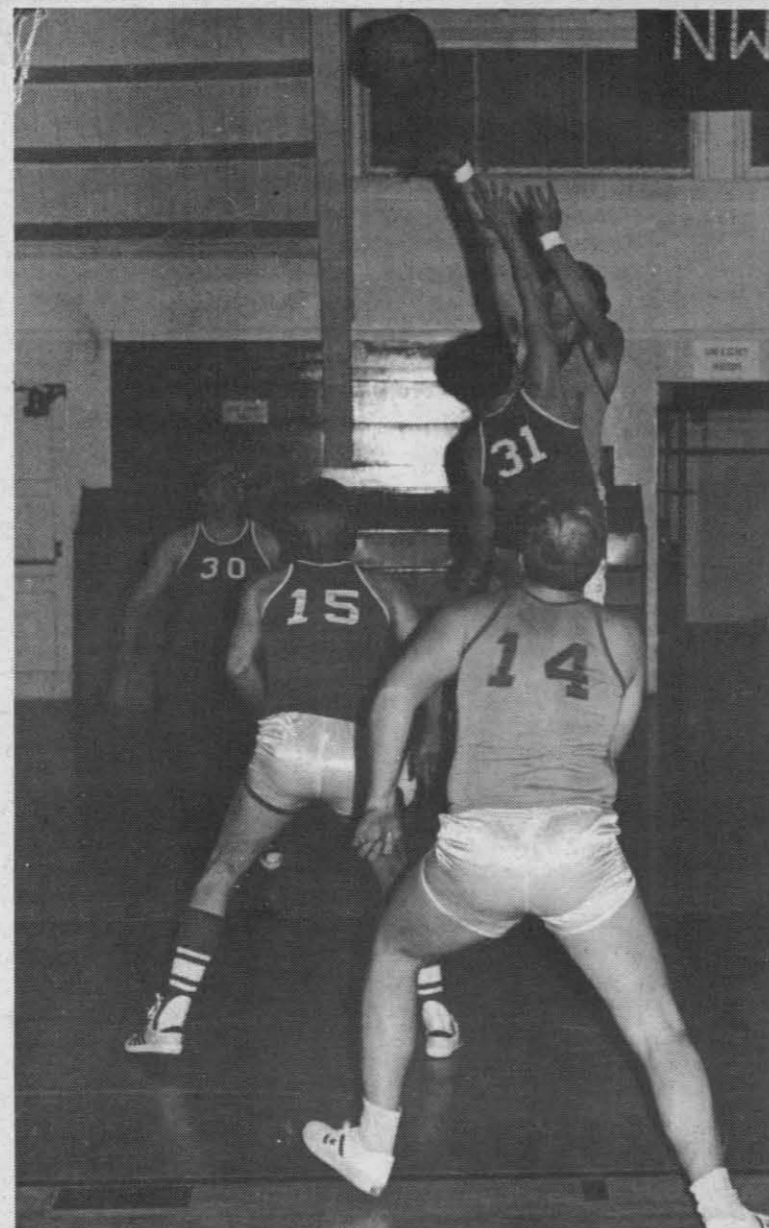
## Golf Course Is Prepared For Unusual Tourney

Wanted—golfers, complete with hiking boots, backpack, canteen and sand wedge to compete in the annual cross-country tournament, sponsored by the China Lake Golf Club. The tournament will be held on Feb. 19.

Format for this unusual golfing event will be 12 holes, and golfers will play to two-thirds of their regular handicap. An example of the type of holes to be played is as follows: Golfers will tee off at No. 1 tee and drive to No. 8 green; then tee from No. 8 to No. 3.

The entry fee of \$3 per person will cover the cost of a cross-country lunch consisting of beer, sandwiches, potato salad and other goodies. Prizes will be awarded on net scores only.

A sign-up sheet is located in the clubhouse. All local hackers are invited to participate.



**VAMPIRES DEFEAT BUD EYRE CAGERS**—Dave Dembeck (taped wrists) shoots over the outstretched arms of Bud Eyre defender Ed Withington (31) in the VX-5 Vampires' first win of the season. The Vampires moved out of the cellar by downing the automotive cagers, 64-41. Vampire John Bateman (14) moves in for the rebound, while Bud Eyre players Rudy Moreno (30) and Mike Ayers (15) look on.

## Antelope Valley Golfers Beat Locals in Match Play

Antelope Valley put the wood to the China Lake golf team once again this past weekend as they shot near-perfect golf to club the locals 19-29 in SCGA play.

Last Sunday's match was played at the China Lake course under sunny skies—much the opposite of the windy, chilly conditions that prevailed a week earlier when A.V. hosted the contest, winning it by a score of 16-32. But the weather didn't help the cause of the local duffers as they lost their second match of the season to the visitors from Lancaster.

Warren Stelzmler, team captain, cited the loss as "just one of those days." He reported that the local golfers played well, but some fancy shooting by A.V. put the match out of reach.

Phil Sprankle and Bob Hooper both had poor luck as they led their respective opponents going into the final hole of play only to see their leads fall by the wayside. Sprankle's foe birdied the last hole and picked up three team points for A.V. and Hooper's opponent chipped in a nine-iron shot for an eagle and the match.

The high-handicappers came through for the China Lake team as Jim Runchey and Glen Shoblom both captured valuable team points.

Max Smith and Al MacDonald, usual stalwarts of the China Lake team for the low handicappers, hit the skids once again and both lost to their opponents.

Many Antelope Valley players remarked about the great condition of the China Lake course. Both teams are hoping to set up a home-and-home return match in the near future.



## Kegler's Korner

By Jack Lindsey

Jim "Tiger" Peck snarled and roared his way through two beautiful games in the Midway League recently. Jim posted scores of 231 and 223. The 231 was exactly 100 pins higher than his third game and Jim's series total was only 585, but it was good enough to lead the league for the night.

Other good scores: Jan Gieger, 226; Dick Drake and Dan Seibel, 225, and Gene Boyts, 222.

Where's the Scores?

The good scores in the Women's Wednesday Handicap have all but disappeared lately. Stella Stillwell led the entire league with a 504 scratch series and Mary Jane Clark had a 208 game. Arlene Harp showed up with a 201, but the real news comes from Cleo Church, who was eligible to vote for Woodrow Wilson. The tiny bowler racked up a triplicate 112 for a nice patch. Nice going, Cleo.

**Sinners**  
Bob Beyer rolled a 600 series and a 232 game to lead the male scoring, while Carol Hudson's 529 was the high mark for the women. Ann Brady had a 492 and Norma Diederich had 495 for two other good scores. Carol also shot 202 for the high single effort.

**Last Week**  
Bob Beyer was the big gun, hitting totals of 205 and 558 to lead the male scoring, while his wife, Barbara, rolled 197 and 513 to lead the women.

**Women's Tourney**  
Dora's Girls, led by Dora Childers, took first place in the team event with a 2775 series. Dora also leads the all-events scratch with a 560 series. The Alley Oops nabbed second place with a 2723 total and third place went to the team from Western Auto for its 2716 total. Lois Smith garnered high game honors with a 233, more than 100 pins over her average.

No News Is Good News

No report from the Premier League again this week since secretary Bill Tamaras left on travel and his replacement has not reported on the league's doings. However, I understand that a rivalry exists between RC Jones, Thad Brightwell and Ken Dalpiaz to see who can outdo the other each week. Last Monday RC won the pot by two pins over Thad. Both men were in the 640s. Brightwell is currently averaging 201 in the league.

As there was no report on the Friday Mixed Foursome, I feel that mention should be made of Brightwell's 705 series last Friday. He missed a triplicate by one pin, shooting 234, 234, 235.

**Ecology Memo**  
I heard that Jeanne Cron, who must have been on an ecology kick, found out the other night that beer and cigarettes don't mix. What happen, Jeanne?

## Propellant . . .

(Continued from Page 1)  
the same general vicinity of the moon. Since launching of the grenades conceivably could jeopardize these other experiments, the seismic experiment must wait until the others are completed.

Another of the launchers will be on-board Apollo 16, and will probably be activated within three months after the landing. This test will have 50 feet more of wire length to allow for greater separation from other experiments which will prevent possible sand and dust contamination by the exhaust.

In addition to the uses by the Apollo program, HiShear Corporation, a sub-contractor under Goodyear Aerospace Corporation on the Viking Mars landing vehicle, for NASA, is putting the propellant into the parachute ejection mortar of the lander vehicle. In a recent test at Edwards Air Force Base, a two-ton package was dropped from a B57 jet bomber, operated by NASA's Flight Research Center from an altitude of 48,000 feet.

Two parachutes were used to slow down the 10-foot-long package. These are deployed by a HiShear design using the PL 6670 propellant. About 14 seconds after drop, the Viking motor system was fired and successfully activated the decelerator system which will be used to slow the descending spacecraft.

Vetter states he had a great deal of expert help on the project. Jud Eldridge, an engineering technician now retired, was deeply involved in the propellant's development.

"The material is now qualified and being used by SOS (the firm which made the item used by Apollo) on the F-14A aircraft in the emergency escape system," Vetter said "The propellant's stability in extreme environments makes it useful for a wide variety of applications."

## Navy To Test 100 Knot Ships

The Navy will soon begin testing two ship prototypes that could lead to a "100-Knot" Navy.

Called surface effect ships, the turbojet powered vessels are designed to skim the water on a bubble of air at speeds in excess of 100 knots.



**POLICE AWARD PRESENTED**—Officer Al Pena, left, of the NWC Police Division, on Monday presented Certificates of Appreciation from the National Police Officers Association of America to (left to right) Rear Adm. W. J. Moran, NWC Commander, Capt. A. E. May, Deputy Commander, Lt. Cmdr. R. M. St. Germain, Head, Security Department, and S. L. Kaupp, chief of police. The four NWC officials were recognized by the National Police Association for their work in the reorganization and professionalization of the Center's Police Division. Pena is a past national vice president of the policeman's group. The awards were presented at the monthly meeting of department heads with the NWC Commander.

—Photo by PHAN D. W. Yeatts

## School Planned for Handicapped . . .

(Continued from Page 1)  
approval for plans for the new building in order that a contract for its construction can be awarded by June 30, which is one of the stipulations of HEW's approval of this project.

Also to be accomplished as a part of Phase II of the China Lake schools' rehabilitation program,

which is a prelude to action on the part of HEW turning over ownership of local schools to the China Lake District, is the construction of a library and activity building at each of the schools, (with the exception of Murray School where such facilities already exist), the construction of a musical facility

at Murray School, and a classroom for educationally handicapped children at Pierce School.

The HEW-financed construction will cover site improvements and utility installations together with all necessary equipment including carpeting for the floors and air conditioning, Pinney said.

Completion of the school for exceptional children is expected in the fall of 1973, it was added.

A physician and full-time therapist will be provided by the Crippled Children's Department, and once a school district has the facilities being planned here for handicapped children, the State Department of Education will allocate an additional \$16,000 to \$20,000 per year to help meet operating expenses.

Earlier this week, Assistant Superintendent Pinney left for Washington to initiate discussions relative to the amount of money that will be needed for building and equipping the school for exceptional children.

## Enrollment In Problem Solving Class Now Open

A course on problem solving and decision making, entitled MIT 5, another in the series of Management Improvement Training courses taught by Guthrie Associates, of Tustin, Calif., will be held in the Training Center March 6 through 9, from 8 a.m. until 4 p.m. each day.

Seven major areas to be included in the seminar are: decision making and organization; motivation and decision making; the process of decision making; analyzing decisions; potential difficulties of decision making; and implementing decisions.

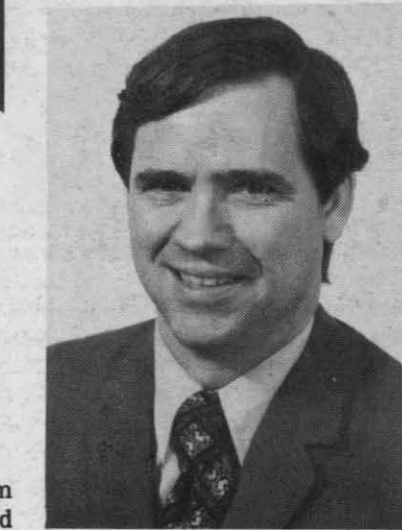
NWC employees who desire to take the course are urged to submit NWC Enrollment Form 12410-28 to Code 654 via department channels no later than Feb. 23. Enrollment is limited to 20 participants.

This course is designed for personnel who currently occupy managerial or supervisory positions.

## William Smith Earns Ph.D. At Arizona State

William H. Smith, a consultant to the Avionics Division, Weapons Development Department, Code 404, was recently awarded the Doctor of Philosophy degree in Systems Engineering from Arizona State University, Tempe, Ariz. Dr. Smith's dissertation was titled, "The Application of Modern Feedback Control Theory to Selected Socio-Economic Systems."

The NWC engineer received a BS in mechanical engineering from the University of Missouri, at Rolla, in 1958 and completed requirements for the Master's Degree in 1964 while attending the



**Dr. W. H. Smith**  
University of California at Los Angeles.

He began work on his PhD under the NWC Fellowship program in 1968 at Arizona State University, and continued to study under the Fellowship program in 1969 and during the first six months of the 1970-71 academic year.

Dr. Smith is a member of Alpha Pi Mu, the national industrial engineering honor society, and was president of the Arizona State chapter during the spring semester of 1970.

While residing in Arizona, his wife, Marcia, completed the requirements for an AA degree in secretarial sciences and is presently employed in the office of Dr. Walter B. LaBerge, NWC Deputy Technical Director. The couple have two daughters, Felicia, 12, and Karen, 10. They have resided at China Lake for 14 years.

## Lifesaving Class To Be Offered By Red Cross

Enrollment is now being taken for the one remaining Red Cross senior lifesaving class that is to be taught locally before summer begins.

The course, which is to get under way on Feb. 26, will be taught at the Naval Weapons Center swimming pool from 8 to 11 a.m. on five consecutive Saturdays.

Anyone who is a capable swimmer and is either 15 years of age or over, or who has completed the ninth grade, can register for the senior lifesaving class by calling either Jackie Haff, 446-7121, or Jennie Levson, 446-5153.

Possession of a valid senior lifesaving certificate is a prerequisite for taking a water safety instructor-water safety aid class that is planned later this spring. WSI-WSA certificates are generally required of lifeguards and camp counselors, local Red Cross officials point out.



**BOWLERS WIN TROPHIES**—Shown with Mrs. Wanda Wisler, special education teacher at Murray School (holding a sponsor's trophy), are the Class A team winners of the Kern County Bowling Tournament, held last weekend in Bakersfield. Bowlers are, (left to right) Roger Janes, Lauren Eisinger, Robert Breazeale, Alberta Hopkins and Rueben Janes. Kneeling are Toni Arabian, left, who placed second in the Class C individual competition, and Vance Eisinger, who took second in Class A individual events. Not pictured is the Class B team, which was notified Tuesday that it also was a division winner. An error of 151 pins in the final totals was discovered in China Lake's favor. The B team members are Pamela Johnson, Wesley Ketola, Teresa Lowman, Dale Graham and Barry Seale. The two winning teams will journey to Visalia on March 4 to compete in the District 7 tournament, against championship teams from Fresno, Tulare, Kings and Kern Counties.



**SUCCESSFULLY COMPLETE CLASS**—Five members of the Marine Corps League-sponsored Morse code class have successfully passed the telegraphy test portion of the novice class Amateur Radio license examination, following a 12 week course taught by the league. Jack Myers and Cass Roquemore, back row, standing, taught the class, and students (l-r) Dave Garretson, Carl Tyler, Joe Cloonan, Wayne Zellmer and Roy Miller, will now take a written examination covering the theory of amateur radio operation, devised by the Federal Communications Commission (FCC) prior to issuance of the license.

# Dr. Frosch Briefed on Programs at NWC

PHOTOS BY BILL FETTKETHER



RETURNING VIA HELICOPTER following a tour of the Echo Range, the Honorable Robert A. Frosch (at left), Assistant Secretary of the Navy (Research and Development) is shown accompanied by Rear Adm. W. J. Moran, NWC Commander, and LeRoy Riggs, head of the Electronic Systems Department.



A DISPLAY OF hardware was set up in Hangar 3 at the Naval Air Facility for inspection by Dr. Frosch (second from left). Others in photo are Capt. R. S. Moore (at left), Technical Officer; Rear Adm. W. J. Moran, NWC Commander; Ernest J. Zellmer, Special Assistant to the Secretary of Navy and (at right) Capt. Frank Grambell, executive assistant and Naval aide to Dr. Frosch.



DR. ROBERT A. FROSCH (facing camera) listens attentively to information being given by Rear Adm. W. J. Moran, NWC Commander (at right). Others shown in this Michelson Laboratory conference room photo are H. G. Wilson, NWC Technical Director; Dr. W. B. LaBerge, Deputy Technical Director, and (at right) Dr. Ivar Highberg, head of the Engineering Department.



LATEST INFORMATION pertaining to the Navy strike warfare systems development capability was given to Dr. Robert Frosch (at left) by Frank Kneymeyer (right) head of the Weapons Development Department. Others listening to Kneymeyer's report are Rear Adm. W. J. Moran, NWC Commander, and Capt. Robert Moore, Technical Officer.



SEATED AT THE flight simulator in the Analog Computer Facility, Dr. Robert Frosch had the opportunity to make a simulated A7E flight during his visit to the Naval Weapons Center. Looking on are (from left) Byron Allen, a mathematician programmer; Rear Adm. W. J. Moran, NWC Commander, and Capt. Frank Grambell, executive assistant and Naval aide to Dr. Frosch.



AN UPDATE ON the AGILE program was given Dr. Robert Frosch by Dr. Frank Cartwright (at left), AGILE Development Division head, who is shown holding a helmet mounted sight. Others following the conversation are (from left) Capt. Robert Moore, Technical Officer; Ernest J. Zellmer, special assistant to the Secretary of Navy, and Capt. Frank Grambell, executive assistant and Naval aide to Dr. Frosch.

# Celebrated Quartet To Perform

## Works of Three Famous Artists To Be Presented

The fourth offering this season of the China Lake Civic Concert Association will be the Juilliard String Quartet, whose members will entertain concertgoers at the Naval Weapons Center Theater on Monday, Feb. 14, at 8 p.m.

Season tickets for admission to this concert, as well as for the final program of the season, "The Ford Comic Opera Theatre," are available priced at \$7, \$6 and \$5 (depending upon location of the seating), and along with single admission tickets (which go for \$5 each) will be sold at the theatre box office on the night of the concert.

Students and enlisted military men can obtain tickets at half the regular rate for the remaining two concert programs of the season, or \$1.50 each for single admission tickets.

The Juilliard String Quartet consists of four highly polished performers: Robert Mann and Earl Carlyss, who play the violin, Samuel Rhodes, viola, and Claus Adam, cello.

The group has scheduled three major works for presentation to local concert-goers. These are: the "Quartet in B Flat Major," Opus 55, No. 13, by Haydn; "Quartet in A Minor," Opus 122, by Khlaui, and "Quartet in F Major," Opus 59, No. 1, by Beethoven.

It is common knowledge that "the Juilliard String Quartet represents the very model of modern quartet playing at its best," as Harold Schonberg of The New York Times put it. "The Juilliard has long held the loftiest place among world quartets and when they played Beethoven it was a genuine meeting at the summit," according to the Pittsburgh Press.

An aura of glamor surrounds each of the Quartet's appearances. When the musicians celebrated their 20th anniversary in the spring of 1967, Newsweek tried to define the reason: "The extraordinary unity the Juilliard Quartet achieves is not the compromise of four musicians mixing a rich homogenized brew with every musical ingredient at hand; instead, the players dynamically assert their individuality, intensifying the tension between the one and the many. The Juilliard's uninhibited performances crackle with electricity as they gamble on a promised fusion that can be almost nuclear in its explosiveness."

In addition to their activities as quartet-in-residence of the Juilliard School of Music in New York, they have been quartet-in-residence at the Library of Congress in Washington since 1962. The latter makes the Juilliard

## 'Star Party' Slated At Sandquist Spa

Telescopes will be set up at Sandquist Spa tonight at 8 o'clock for a "star party," planned by the China Lake Astronomical Society. The event is open to the general public. A society spokesman recommended that all guests bring flash lights and binoculars.



THE JULLIARD STRING QUARTET

Quartet the official First Family of Tass News Agency following the States and also gives them the privilege of using the invaluable Stradivarius instruments willed to the people of the United States by Mrs. Gertrude Clarke Whittall in 1936.

Since the Juilliard Quartet began its activities in 1946, they have built up a repertoire of 135 works, ranging from the classics—Haydn, Mozart, Beethoven, Schubert—to the moderns—Bartok, Webern, Schoenberg, Ginastera. They are champions of American composers, playing works by Copland, Schuman, Sessions, Piston and Carter. It was the Juilliard Quartet that presented the world premieres of Elliott Carter's Quartet No. 2, the Humphrey Searle Quartet.

Music circles abroad have extended an ever increasing number of offers to the ensemble. In 1961, they were the first American string quartet to visit the Soviet Union. "Magnificent harmony and purity of sound and deep penetration into the conceptions of the composers,"

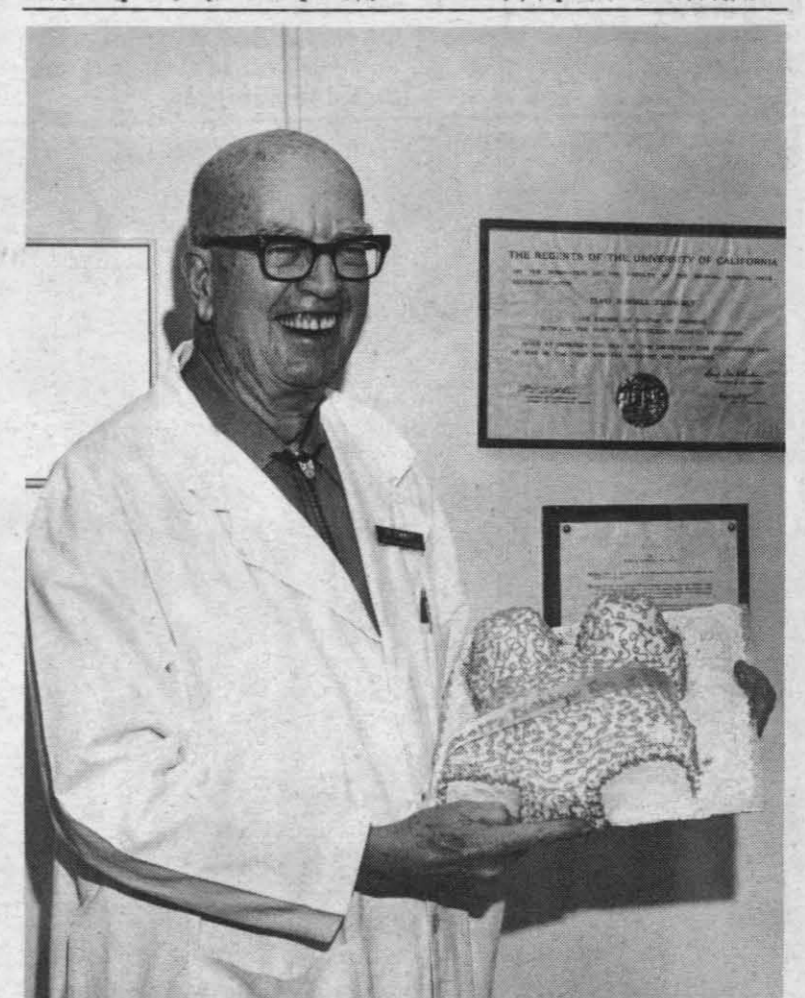
commented the music critic of the Tass News Agency following the Quartet's first Moscow concert which ended with four encores and a standing ovation.

As for the reaction of their Russian fellow musicians, in the words of Alexander Sveshnikov, director of the Moscow Conservatory, "They played as if the instruments were parts of their bodies." The Quartet returned to the Soviet Union for another triumphant tour in May and June 1965.

Later on, they performed in Australia and New Zealand, and, under the auspices of the State Department, in Japan. In May 1967, they made their South American debut with three concerts in Buenos Aires, two of them at the Teatro Colon.

It goes without saying that they have also participated in every major music festival throughout the world.

The Quartet's numerous recordings have been released by Columbia, Epic and RCA Victor.



80 YEARS YOUNG—Dr. Elmo Zumwalt, NWC Industrial Medical Officer, holds a "bikini-cake" baked for him by an "appreciative patient," in celebration of the medical man's 80th birthday this past Monday. The cake was presented to Dr. Zumwalt during a surprise birthday party, planned by the staff of the NWC Dispensary. Also attending were Capt. H. D. Parode, head of the Command Administration Department, and personnel of the Safety Department.

## Construction of Fair Building Now Proceeding at Steady Rate

Construction of the new multipurpose community building, to be located on the Desert Empire Fair grounds, is progressing at a steady rate, according to a recent report by C. E. "Zip" Mettenburg, president of the DEF board of directors.

According to Mettenburg, construction work on the large building will continue as financial arrangements are accomplished. In addition, Mettenburg announced that work on a permanent first aid station, to be manned by members of the Ridgecrest Volunteer Fire Department, is proceeding rapidly.

"Volunteers have dug the footings and foundations and installed rough plumbing and reinforcing steel," Mettenburg said. "The concrete slab will be poured soon and the station will be ready for operation well before the Spring Festival, May 25-29," Mettenburg added.

The first aid station, which will be manned by the Volunteer Firemen during all large events on the fairgrounds, is a 14 by 14 ft. square block building, to be located northwest of the stage area.

In other DEF news, Mettenburg announced that Gene Richardson has been assigned the duties of parade coordinator and Bob Waters will be the rodeo coordinator. Al Blakemore will assist with planning for the 1972 Desert Empire Rodeo, scheduled for either the first or second weekend in May.

## Red Cross Class In Prenatal Care To Be Offered

Persons interested in attending a Red Cross mother and child care class have until March 1 to register for it.

Registration can be made by calling either Mrs. George Silberberg, phone 446-5007, or Mrs. Ben Tozer, phone 446-7242. The night during the week that is most convenient for a majority of the students will be chosen for the six class meetings that will follow.

## Happenings Around NWC

The annual meeting of the membership of the Naval Weapons Center Federal Credit Union will be held on Thursday, March 2, at 7:30 p.m. at the Community Center.

All Credit Union members are urged to attend to see and hear the reports on all 1971 activities, and listen to plans for 1972.

Door prizes will be awarded.

**Celebrated Caller Here**  
The Cactus Squares square dance organization will present another "Sets In Order" magazine "Hall of Fame" caller when Frank Lane will visit the local area on Feb. 17. Lane will call for dances from 8 until 11 p.m. at the Community Center. The donation is \$3 per couple and all square dancers are invited to attend.

**Veterans' Seminar**  
A free seminar for veterans, widows and dependents of veterans will be sponsored by the American Legion on Saturday, Feb. 19, at the

American Legion hall, 641 Inyokern Rd., beginning at 3 p.m. Jim Kelley, 27th District officer, will conduct the seminar, which will cover the topics of new and old benefits that are available. A question and answer period will follow Kelley's presentation.

**Gun Club Dinner**  
The Sierra Desert Gun Club will hold its annual installation dinner at the Chief Petty Officer's Mess Monday, with dinner scheduled for 7 o'clock, preceded by a social hour.

Tickets, priced at \$4, are available from any club officer, or by calling Jack Prentice, 375-8810, Bob Gould, 375-9170, or Bernie Mathes, at 446-4487. Reservations must be made no later than 5 p.m. today.

Jay Harris, former national high power rifle champion, will speak to the group on "The Role of Marksmanship in Game Conservation." Harris is the DFG warden for the Lake Isabella area.