

CROSSWORD PUZZLE

Answer to Previous Puzzle

Crossword puzzle grid with clues for Across and Down. Includes a small grid for the previous puzzle's answer.

SHOWBOAT

FRIDAY, JAN. 11
'MARCO POLO' (92 Min.)
Rory Calhoun, Yoko Tani
7 p.m.
(Adventure in Color) Fan, action, romance and adventure as the hero, and his faithful Chinese servant boy, fight off the forces of an evil Prime Minister and rescue a princess.



GOES FOR TWENTY — Earl F. Barnhart, FTG-2P1, and his wife, Bette, seem pleased as LCdr. P. F. Mohr, skipper of NOTS Enlisted Personnel Division, swears in the 15-year career man for another six years which will put him over the top for 20. His wife works for the Navy Exchange.

SUN.-MON. JAN. 13-14
'THE NIGHT THEY KILLED RASPUTIN'
Edmund Purdom, John Barrymore, Jr.
7 p.m.
(Drama) The story of the rascal monk, Rasputin, who gains court favor and romances the Czarina. Opposing forces try to eliminate him and thereby hangs the tale of intrigue and dering-do.

Community News

Tickets went on sale this week in Ridgecrest and at China Lake for the coming series of five travel film programs on "The World Around Us" that will be presented for all residents of the area by the China Lake Community Council.

THURS.-FRI. JAN. 17-18
'NO MAN IS AN ISLAND' (114 Min.)
Jeffrey Hunter, Marshall Thompson
7 p.m.
(War Drama in Color) Suspense and intrigue from us with action to highlight this story based on a true episode of WWII as a Navy radioman helps the islanders combat the invasion of Guam and sabotage the Japanese.

TUES.-WED. JAN. 15-16
'COME SEPTEMBER' (112 Min.)
Rock Hudson, Gina Lollobrigida, Sandra Dee
7 p.m.
(Coedy in Color) Lough and laugh as the rich American arrives at his Italian Villa, for his annual tryst with a beautiful girl friend, and finds his caretaker has rented it to boarders. Relax and enjoy this riot.

NOTS Employees Federal Credit Union Members Meet
7:30 p.m., Jan. 16
Murray School Cafetorium

CPO WIVES ELECT
The regular meeting of the C.P.O. Wives Club was held on Jan. 7. Elected to office for the new term were: Arlene Braley, president; Eva Grose, vice president; Jeanee Vardell, secretary; and Betty Jo Kennedy, treasurer.

CARE's gift of nursing books for a library helped establish Turkey's first college level nursing school last fall at Ankara.

BARN DANCE C.O. CLUB
Grab your pardner and come to "The Ole Club Barn" on Friday, January 18 at the Commissioned Officers Mess. There will be Western and Country music and a delicious Chuck Wagon dinner.

WOMEN'S GUILD TO INSTALL
The Women's Guild will have their Installation of New Officers on January 15 at 7:30 p.m. in the East Wing of the All Faith Chapel.

BURROUGHS SCHOOL PLAY
"Old Doc," the first Burroughs High School play of the season, will be held Tuesday and Wednesday, January 15-16, at 7:30 p.m. in the Burroughs' multi-use room.

STRING SOCIETY CONCERT JANUARY 21
The second concert of the 1962-63 season will be presented at the Station Theatre Jan. 21 and will feature the String Society of Los Angeles with Marilyn Horn, soprano, as soloist.

Garman stressed that 100 percent participation and a "generous gift" will be the theme of the campaign. "If we all do what we conscientiously can," he said, "I am confident that our showing will be even better than last year's."

Stork '63 Where Were You?

Elizabeth Ann McFarland Is First 1963 Baby Here

Welcome aboard, Elizabeth Ann McFarland! You have the distinction of being the first baby born at NOTS, China Lake, in the brand new year of 1963. In your own personal history book, the great day shall be inscribed, Jan. 5. The time, 12:30 p.m., at the Station Hospital. You weighed in at seven pounds, one and one-half ounces. And, in blessed event parlance, you're "doing fine."



FIRST 1963 BABY born at Station Hospital, Elizabeth Ann McFarland snoozes in arms of her mother, Mrs. Wayne McFarland. Daddy is Lt. Wayne McFarland of Supply Dept.

Nabbed, Fined For Cheating In CSC Exam

An applicant for a Civil Service Commission appointment was sentenced to one year probation and fined \$250 in U. S. District Court, San Francisco, after being indicted and convicted on a charge of engaging another person to take a CSC examination for him.

Propellant Progress
A combined liquid-solid propellant, named "Hybrid," and developed locally, won renewed acclaim for China Lake in the list of annual achievements.

CARE farm tools, initial food rations, helped to resettle 4,000 refugee families on new homesteads in Vietnam last year.

NOTS China Lake placed twice in a list of 38 significant events that the Chief of Naval Operations termed the Navy's outstanding achievements during 1962.

NOTS Praised by CNO

Now designated project "Stormfury" as a joint Navy-Weather Bureau program, efforts will continue to be made by these two agencies to perfect a means of combatting hurricanes over the next three years.

Garman To Head 1963 Federal Joint Crusade

Lester "Red" G. Garman has been appointed 1963 Chairman of the annual National Health Agencies—Federal Service Joint Crusade fund campaign, scheduled to start Jan. 14, following a "kick-off" meeting to be held in Conference Room "A" of Mich Lab Monday.



Lester "Red" G. Garman

Garman stressed that 100 percent participation and a "generous gift" will be the theme of the campaign. "If we all do what we conscientiously can," he said, "I am confident that our showing will be even better than last year's."

The concept of using solid and liquid propellants together is not new, but the success of tests (made at China Lake) marks a significant milestone since it is the first time a free-flight has been made with the critical engineering problems apparently solved," the pamphlet remarked.

The Cuban quarantine, Commander Wally Schirra's six-orbit space flight, amphibious aircraft flight records, geodetic satellite Anna launching, first interception of surface missile by air-launched missile, launching of advanced Polaris, Navy lab work on NASA research projects, Deep Freeze '63, seaplane with hydrofoil testing, periscope alignment facility dedication, were some of the top ranking achievements listed.

The balance were submarine launchings, commissioning of the first nuclear powered destroyer, USS Bainbridge, P3V joined the fleet, largest hydrofoil launched, Navy aids first international satellite launch.

Work on "trackless" catapult, new precision tracking system to study fish movements, new amphibious vehicles development, Marine Corp transfers "Terrier" missiles to Navy, board of inspection and survey active, Reserve Fleet reduced, fleet maintenance on schedule, Navy modernized world's largest centrifuge, Reserve production equipment utilized, competitive and incentive procurements increased, facilities acquired, industrial reserve plants sold, newly developed "jet" gun aids neurosurgery, top Navy medical men convene, Project Squid transferred to U. of Va., contract awarded for undersea research vehicle, rescue at sea, Navy performs humanitarian services, progress of People-to-People program, Ship visits and Navy sponsorship of mathematical research series.

Spring Education Courses Outlined

An unusually wide variety of education and training opportunities is being made available at NOTS this semester, as outlined in the Spring Course Schedule compiled by the Personnel Department.

R. W. Anderson, Head of the department, points out that UCLA, USC, Bakersfield College Evening Division and Burroughs Evening High School are offering evening courses. Day classes have been scheduled for scientists and engineers, clerical personnel, journeymen and technicians. Supervisor and executive development courses are also on tap.

All NOTS personnel are urged to contact their supervisors to get a copy of the Course Schedule to familiarize themselves with the educational opportunities and to plan their own work and school programs. Pre-registration dates for the

RAdm. Loomis Named 11ND Commandant

RAdm. Almon E. Loomis took over as Commandant, 11th Naval District, relieving RAdm. Murr E. Arnold, in impressive change-of-command ceremonies on Dec. 31 at San Diego.

Admiral Loomis formerly was Deputy Commander in Chief, U. S. Naval Forces in Europe. A stranger to San Diego, he served there in April, 1944, as Chief of Staff to Commander, Carrier Division 25, and in 1946-48 as Commanding Officer of the Naval Amphibious Training Unit Air Support School, Amphibious Training Command, Pacific Fleet, at Coronado.

Upon his relief from command, Admiral Arnold retired after more than 42 years of Naval service. He and Mrs. Arnold plan to live in Coronado. Prior to becoming Commandant, 11th Naval District, Admiral Arnold was Commander, Fleet Air, Alameda, from April, 1958, until July, 1960.

Life of Medic: Work, Work, Work

A glance at the Station Hospital records this week would force the average human to gulp down a couple of aspirin. That unit's 29-man enlisted staff and 8 doctors conducted 34,217 outpatient visits during 1962! Between visits, 7,695 physical examinations were made, 7,446 shots given, 7,602 x-rays snapped, 14,862 prescriptions filled, 56,352 lab tests made, 611 patients admitted to sick list, and 186 births recorded.

Aerospace Engineer Vacancy at Alameda

A vacancy for a Supervisory Aerospace Engineer, GS-13, with a salary range from \$11,150 to \$14,070 per annum, exists at the Naval Air Station, Alameda, Calif. The position is that of Superintendent of Design and Development Division, Aeronautical Engineering Group, Overhaul and Repair Department. Candidates must be qualified Aerospace (Aeronautical) Engineers. Applications should be sent to the Industrial Relations Officer, U.S. Naval Air Station, Alameda, Calif. Applicants can also contact the Industrial Relations Officer by calling LA 3-2200, Ext. 4835, Alameda.



SWEEPSTAKES WINNER in the Christmas home decorations contest sponsored by NOTS Community Council and Ridgecrest Chamber of Commerce, Froilan Ramos is presented two family season tickets to "The World Around Us" series by Mike Kauder (right), chairman of the contest. Looking on in front of the Ramos home at 211-B Hornet are precinct directors Robert Glen (left) and Billie Hise. Mrs. Ramos holds 3-month-old Belinda. Ramos had worked two months decorating his home.

Form with fields for 'From', 'TO', and 'PLACE STAMP HERE'.

See Next Week's Rocketeer For Complete Course Schedule, Info

Community Council Elects '63 Officers

The 1963 slate of officers of the China Lake Community Council was elected at the Board of Directors meeting Tuesday evening at the Community Center.

William Hattabaugh is the new president. Harry Bearman was elected vice president, Robert Glen is the new executive secretary, Mike Kauder became recording secretary, and John Hensley is the new treasurer.

In their capacities as president and vice president, Hattabaugh will also sit on the Station Policy Board, and Bearman will be on the Community Hearing Board.

At the meeting, Austin Ross, Head of Employee Management Relations Division, representing Station Command, gave the status of negotiating commercial contracts and explained the differences between professional and retail contracts.

Also discussed was the safety hazard at the juncture of the access road from Burroughs High School and China Lake Blvd. Dan Butler and Joe Smith were named committeemen to study the matter and refer back to the Council.

The Installation of Officers Dinner will be held Jan. 16 at The Hideaway. For reservations, call 723293 or 77002. Keynote

speaker will be Dr. Bruce Storm, Professor of Public Administration of the Graduate School of USC.

Death Valley '49ers To Tour Test Facilities

A contingent of some fifty members of the Death Valley '49ers is scheduled to arrive here today at noon to begin a 2-day tour of Naval Ordnance Test Station facilities.

Captain Charles Blenman, Jr., Commander of NOTS and host to the visiting group, said his guests would witness presentations at Michelson Laboratory, test range firings and tours this afternoon. Included in the afternoon events will be a tour of the newly opened Maturango Museum.

A reception and dinner will honor the visitors this evening at the Commissioned Officers Mess. A Board of Directors meeting is scheduled early tomorrow morning while wives accompanying the '49ers will be conducted on a tour of this area by George Sutherland.

A noon luncheon at the home of Captain Blenman will climax the visit. Scheduled to participate in the visit are:

- Mr. and Mrs. Thomas H. Baskins, Mr. and Mrs. Paul D. Dooly, Mr. and Mrs. William H. Newbro, Mr. and Mrs. L. Burr Bellon, Mr. and Mrs. Charles A. Scholl, Mr. and Mrs. Paul Palmer, Mrs. Hazel R. Henderson, Miss Ruth Woodham, Mr. and Mrs. Ralph P. Merritt, Miss Varina Merritt, Mr. and Mrs. Thomas Clements, Mr. and Mrs. Hugh C. Telford, Mr. and Mrs. Richard C. Bolly, Mr. and Mrs. Floyd B. Evans, Mrs. Pat Sturtevant, Mr. Harry F. Gower, Mr. and Mrs. Willard Wade, Mrs. Gertrude G. Harrison, Miss Mary Moon, Capt. and Mrs. R. A. Gibson, Dr. and Mrs. S. R. Broadbent, Mr. and Mrs. Carl C. Cowles, Mr. Kenneth Reim, Mr. William Thompson, Mrs. Margaret Lewis, William G. Rea, Mr. George Sturtevant, Mr. and Mrs. Thomas W. Mathew, Mr. and Mrs. Alec C. Krater, Mr. and Mrs. Paul DeDecker, Mr. Henry Hellmuth and Ralph A. Fear, President.

Oral Polio Vaccine, Type I, Ready For Military Families

Oral Sabin polio vaccine, type I, will be given to military dependents at the Station Hospital during the period 1300-1600 Friday, 18 January.

Dr. Speaker, NOTS Senior Medical Officer, recommends that all dependents except infants under 6 (six) weeks of age be immunized with oral Sabin vaccine notwithstanding the fact that they may have previously received Salk polio vaccine. Dependents who received the oral Sabin vaccine from Drummond Medical Center during the Spring of 1962 SHOULD NOT retake the vaccine at this time.

Registration and payment of fees for the USC courses will take place on Feb. 5 in Conference Room A, Michelson Lab at 2:30 p.m. Those unable to attend should contact the registrar in the Education Office, Room 1004, Michelson Lab.

Bakersfield College Evening Division, China Lake, registration begins on Jan. 23 through Jan. 25. On the 23rd and 24th, register in the College Library from 5 to 8 p.m. On the 25th, in the College Office at Burroughs High School campus, from 8 a.m. to 5 p.m.

Registration for the following programs at NOTS starts immediately through Jan. 31: Professional Day-Class, Supervisor and Executive Development, Journeyman and Technicians Development, Clerical Development, and Specialized Training. For immediate information on these, contact your department's personnel technician.

The complete Spring Course Schedule will be printed next week in a special four-page lift-out section of The Rocketeer.

Korean refugees can now build durable homes for less than \$100 with simple-made earth-blocks manufactured by a machine developed and loaned to refugees and destitute families by the American-Korean Foundation. You can help through your Federal Service Joint Crusade.

Laud Citizens' Work for Kern-S.B. Land Swap

An exchange in land between San Bernardino and Kern Counties—designed to transfer into Kern County 15 families now living at China Lake—advanced toward conclusion stages this week with the circulation of a required petition.

Dr. Alvin S. Gordon, one of those involved and instrumental in helping resolve the dual county boundary dispute, said final agreement between County Boards of Supervisors could materialize within 3 months.

Signatures Required The citizen petition secured 25 signatures of registered voters from San Bernardino County "as a direct result of cooperation extended from Trona citizens," according to Gordon.

He praised the services of the County Service Area Advisory Committee and the Trona Chapter of the Business and Professional Women. He said individual credit was due Mrs. June Amilie for securing the Kern County signatures.

In its approved form the petition will swap two parcels of land in Kern County for an equal amount in San Bernardino County, giving consolidated representation to citizens living in Kern County.

Richard P. Hartnett, Community Relations Assistant at China Lake, said the measure would restore political identity to the families living in 15 housing units located on the east side of Blue Ridge road, just across from the current county boundary.

Public hearings in each county involved, legislative actions by State agencies, and final agreement by County Boards of Supervisors must be gained before boundary changes are made, he pointed out.

Educational Opportunities Abound Here

(Continued from Page 1) through Feb. 1.

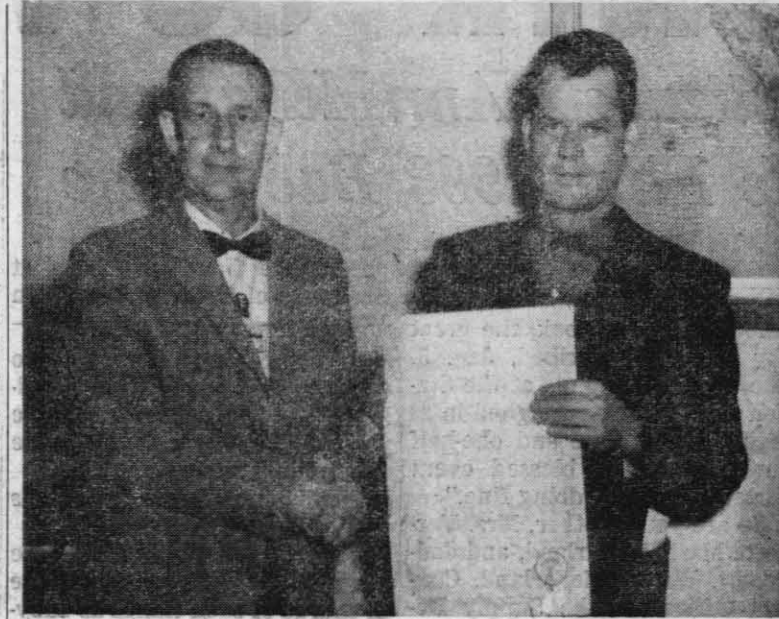
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WELCOMED HOME—Larry Nichols holds a scroll prepared by members of AOD as he is welcomed back by Dr. Newt Ward after an 18-month assignment in England.

Larry W. Nichols Returns From Great Britian Tour

Lawrence (Larry) Nichols of the Aviation Ordnance Department and his wife, Ruby, and son, Richard, have returned to NOTS after 18 months in England where Larry was on a special assignment as an exchange scientist under the Tripartite (Canadian-British-United States) Technical Cooperation Program.

A pioneer and a well-recognized authority in the field of infrared application, he was selected for the assignment by the Infrared Sub-Group J of the Tripartite Committee on Guided Missiles and with strong endorsements by O.N.R., BuWeps, and NOTS.

Assigned to the staff of the Royal Radar Establishment, which is a government research and development laboratory located at Malvern, his work involved the exchange of ideas, techniques, and information in the field of infrared applications.

When Larry can find time from his demanding job as head of AOD's Research Division he can be found adding improvements to the Nichols residence at 30C Intrepid Road.

Thompson Award Winner Larry's greatest surprise during his assignment abroad came on Nov. 17, 1961 when Dr. McLean cabled him that he had been selected to receive the L.T.E. Thompson Award. The Station's highest recognition for outstanding individual achievement.

PIN - UP SET

STATION HOSPITAL

ADAMS, Thomas Ray, 6 lbs., 13 oz., born to Mr. and Mrs. James Adams, A/E2 of 401 Ridgcrest Blvd., Ridgcrest on Dec. 17.

LeBLANC, Steven Richard, 6 lbs., 14 1/4 oz., born to Mr. and Mrs. Joseph F. LeBlanc, Jr., Lt. SC of 45-A Hayward on Dec. 18.

SECKLER, Richard Lee, 7 lbs., born to Mr. and Mrs. Wm. Edward Seckler, AMS3 of 343 Toro, Ridgcrest on Dec. 23.

KOLB, Kevin Scott, 8 lbs., 3 oz., born to Mr. and Mrs. Jerry Lee Kolb, AC3, of 206-B Langley on Dec. 25.

STETTINISCH, Julie Ann, 6 lbs., born to Mr. and Mrs. Eldon G. Stettinisch, AD2, of 106 Searles, Ridgcrest on Dec. 27.

COLLINS, Gary Michael, 7 lbs., 8 oz., born to Mr. and Mrs. Gary M. Collins, AE2, of 116 Caricart, Ridgcrest on Dec. 27.

McFARLAND, Elizabeth Ann, 7 lbs., 1 1/2 oz., born to Lt. and Mrs. Wayne McFarland of 717 Kearsarge on Jan. 5.

RIDGECREST HOSPITAL

BOSHEARS, Cynthia Lee, 6 lbs., 11 1/2 oz., born to Mr. and Mrs. Stanley M. Boshears of North Edwards on Dec. 29.

SASAKI, Leslie Fuki, 5 lbs., 14 oz., born to Mr. and Mrs. Richard M. Sasaki of 110-Nadeau, Ridgcrest on Dec. 28.

GRIFFITH, Michael Lynn, 7 lbs., 14 oz., born to Mr. and Mrs. Gene M. Griffith of Boron on Dec. 30.

STREUBER, Raymond Charles, 5 lbs., 12 oz., born to Mr. and Mrs. John H. Streuber of Mojave on Dec. 30.

NEWMAN, Carrie Leigh, 5 lbs., 14 oz., born to Mr. and Mrs. Ronald D. Newman of 404 Alvord, Ridgcrest on Dec. 31.

GONZALEZ, Marie Evalina, 8 lbs., 5 1/2 oz., born to Mr. and Mrs. Richard T. Gonzalez of Trona on Dec. 31.

BARNES, LaVisa Dec, 5 lbs., 6 oz., born to Mr. and Mrs. Joerice Barnes of 415-B Monterey on Jan. 1, 1963.

KLINE, Dean Mitchel, 7 lbs., 4 oz., born to Mr. and Mrs. Harold E. Kline of Boron on Jan. 2, 1963.

ROHRET, Raymond Alan, 7 lbs., born to Mr. and Mrs. Richard D. Rohret of 327 Robalo, Ridgcrest on Jan. 3, 1963.

RIM SHOTS

By BILL VALENTEEN



Hi-ya, Sport, I didn't get a chance to wish you a Happy New Year because the bottom of my column was cut off in the last edition. But let me be the first to wish you a Happy Easter!

I understand Ron VanderKelen, favorite Wisconsin son, had a date with Nancy Davis, the Rose Queen, the night of the Badgers' recent defeat. He must have received her consent in the time-out period between the third and fourth quarter. How about that Rose Bowl! Wasn't that something? Wisconsin won everything but the game. That's what I call winning the battle and losing the war. One think irritated me, though, and that was the asinine performance by the officials. You can always tell when they're doing a lousy job. If you notice them too much, and how long the game runs. I'm glad the Trojans won, or this would all sound like so much sour grapes.

Speaking of football, a bunch of us were discussing the merits of the field goal in the game. We sort of came up with the consensus that the game would be better served if an alteration to the field-goal-kicking rule was utilized. I don't know about you, but it takes something out of the spectacle for me when a team barely makes it to the opposing team's 43, and then boots it between the uprights for a score. Now, I'm not saying this is an easy task, but lately the pros all have somebody who can boot a 45-yard field goal, so why not 50 it this way? The rule should be changed so that if a field goal attempt is missed, the ball stays at the previous spot. I'll bet we wouldn't see as many people kicking field goals, and it would sure make the game more interesting.

Over the holidays, I got a chance to play a little golf. And, I want you to know that I was sorely disappointed by the display of etiquette (or lack of it) engendered by some of the players on that particular day. It's been a long time since I scored well on the links, and I don't play much anymore, but when I do go out I like to think that I'm not interfering with the pleasure of other golfers who are also trying to enjoy themselves. For the benefit of those who have not as yet learned the social graces of the "royal and ancient game," let me give you some cheap advice. Here are twelve unwritten laws of any decent course:

- 1. Don't talk or skylark around the tee area.
- 2. Don't practice your chipping around the tee area.
- 3. Always allow faster players to "play through."
- 4. Walk out of a sandtrap the same way you go in, and smooth it over as you go.
- 5. Replace all divots.
- 6. Don't run carts up on the aprons.
- 7. Repair "English" divots on the greens.
- 8. Don't drop the flag on the green.
- 9. Don't step on another player's "lie."
- 10. Don't let your shadow fall on the cup or a putter's lie.
- 11. Always spot your ball when you're within eight feet of the cup.
- 12. Don't tarry on the green totalling up your score.

Now this sounds kind of straight-laced, but you'd be surprised how a little consideration of the kind just mentioned is appreciated by your fellow players. The one and only time I stepped on a fellow's lie, I got the shine messed up on my brand new Footjoys by a very sharp putter. "Nuff said!"

American Legion baseball is coming back to the Indian Wells Valley, I hear. This league, of course, will be for boys 16-19 who should be out working for a living. The Legion is in the process of raising funds to get uniforms and equipment for the hardballers and they're putting on several activities so you can really get your money's worth when you contribute. Watch for them, if you will, and do what you can.

Last Tuesday night, another meeting of the Little League group was held to organize the activity for the coming year's play. They're expecting about 300 boys to turn out this year and there's quite a bit of work left to do before the season starts. There will also be an advanced T-ball League this year, using some sort of actual pitching arrangement. The Pony parks are still not completed. The league needs a good blocklayer to help finish some of the buildings, for one thing. There will be a work group in the park area on Saturday starting at 9 a.m. Your able arm will be dearly appreciated.

UCLA took the Los Angeles Basketball Classic just as I predicted. I'm sure that had a lot to do with it. Well, keep smilin', Sport! See you next week!



READY TO ROLL—Captains of five military teams that rolled into second half of season competition posed for this shot, then promptly squared off for tiff that'll run through



LADIES' GOLF ASSN. OFFICERS getting in some practice swings for the coming year are (l to r). Treasurer Reggie Hibbs, Secretary Nona Turner, Vice President Phyllis Davis and President Mary McDonald. New slate held first meeting last Monday.

Blind Athlete To Perform Here Jan. 27

A real treat is in store for the golf and bowling fans of the Station on Sunday, January 27 when Hank Davis, who is totally blind, will put on a golfing exhibition at 11 a.m. at the local golf course and a bowling exhibition at the Anchorage alleys at 3 p.m. the same afternoon.

In 1958 Hank won the Middle Atlantic Blind Golfers Association's annual tournament, and was crowned the "Blind Golf King."

Hank carries a 184 bowling average, Dick Weber, a member of the AMF Staff of Champions, said this of Hank. "The execution of his approach and delivery is perfect. As good as any of the top bowlers in America."

A \$12,000 mobile Health Unit supplied through CARE inaugurated the first public health service for 250,000 people of Yucatan.

Lady Linksters Elect, Plan 1963 Activities

The monthly China Lake Women's Golf Association luncheon meeting was held at twelve o'clock on Monday, January 7, at the Station Restaurant.

The new president, Mary McDonald announced the members of the working committees. Sunday tournaments will be handled by Mary Louise Kummings and Eileen Russell.

Handicaps will be figured by Kay Someson with various members working with her each month. Hospitality will be headed by Pat Hodson. Weekly tournaments will be conducted by last year's committee Dot Gould and Joyce Lippincott until replacements are appointed.

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Bowling Statistics

Table with columns: Team, Won, Lost. Lists bowling statistics for various teams like Bluejackets, Headhunters, Sidewinders, etc.

Table with columns: Team, Won, Lost. Lists bowling statistics for Armed Forces Mixed Couples, Hits & Misses, Weegee, etc.

Table with columns: Team, Won, Lost. Lists bowling statistics for Indian Wells Valley Women's Bowling Assn., Pin Ticklers, Go Go Gals, etc.

Table with columns: Team, Won, Lost. Lists bowling statistics for Tired Squaws, Devil Cats, No Names, etc.

Reduce Speed Limit The speed limit on Sandquist and North Lauritsen Roads has been reduced from 45 mph to 35 mph, due to observed violations of the previous limit. K. S. Skaar, Head of the Safety Department, announced.

Action was taken upon request of Capt. Jack W. Hough, Commanding Officer of NAF, and with the concurrence of other Departments using the area.

New Aide Reports Here For Duties



Lieutenant (jg) William M. O'Mara, formerly attached to the Amphibious Command ship, USS Estes, has assumed duties as military aide to the Commander, U. S. Naval Ordnance Test Station.

The newly assigned officer relieved Lieutenant Walter W. Carter, Jr., who has been released to inactive duty.

A graduate of Loyola University in Los Angeles, Lt. O'Mara lives with his wife, Sandra Jeanne, and son, Sean P., 4 months at 511-B Saratoga.

Burroughs Evening Classes

Thirty-one classes will be offered on the Burroughs Evening High School schedule for the new semester which begins on January 28. Enrollment for the classes will be at the Burroughs High School office, 6:30-8:30 p.m., on January 14, 15, 16 and 17.

Classes being offered are: Monday: Algebra 2, Arithmetic Review, Art 2, Electronics 1, Geography, Interior Decoration, Spanish. Monday and Wednesday: Swimming. Tuesday: Astronomical Instrument Design, Bookkeeping 2, Basic Electricity, English Review, U.S. History 2, Needlecrafts, Sewing 2, Short-hand 2. Wednesday: Algebra 1, Civics, Expectant and New Parents, German 1, Industrial Mathematics, Needlecrafts, Sewing 3; and Typewriting 1. Thursday: Art 4, English 4, English for Foreign Born, Mechanical Drawing and Blueprint Reading, Sewing 1, Reading Improvement and Typewriting 2.

Additional information may be had by calling the Adult Education office, 72019, during the day before 3:30 p.m. Schedules will be mailed upon request.

NOTS Pasadena News

Virginia E. Lane — Ext. 481

UNIVAC 490 Success Told in Test Runs

Breaking 'Acoustics Barrier'

A Sperry Rand UNIVAC 490 Real Time Digital Computing System is now in operation with the Hydrodynamic Simulation Facility of NOTS, Pasadena, Capt. E. I. Malone, Officer in Charge, announced.

The UNIVAC 490 performs specific functions in the simulation analysis of torpedoes and anti-submarine warfare fire-control systems. The major function is to present the acoustic characteristics of a submarine both active and passive.

As Lloyd Maudlin, Head of the Simulation and Computer Center, explains, "The complexities in design, development and evaluation of any guided missile are multiplied when the flight medium is at sea. It is a changeable environment, full of currents, thermoclines, and noises that make comparison studies of underwater ordnance almost impossible."

In effect, the enlarged computer center now reduces these complexities and provides amazingly accurate results in test runs. It is estimated that each test run costs only about \$25. At sea, a test could cost thousands.

"A constant environment was created in the laboratory that eliminates the vagaries of nature's ocean and all the complicated and expensive ships and shore equipment and target submarines," Maudlin continues.

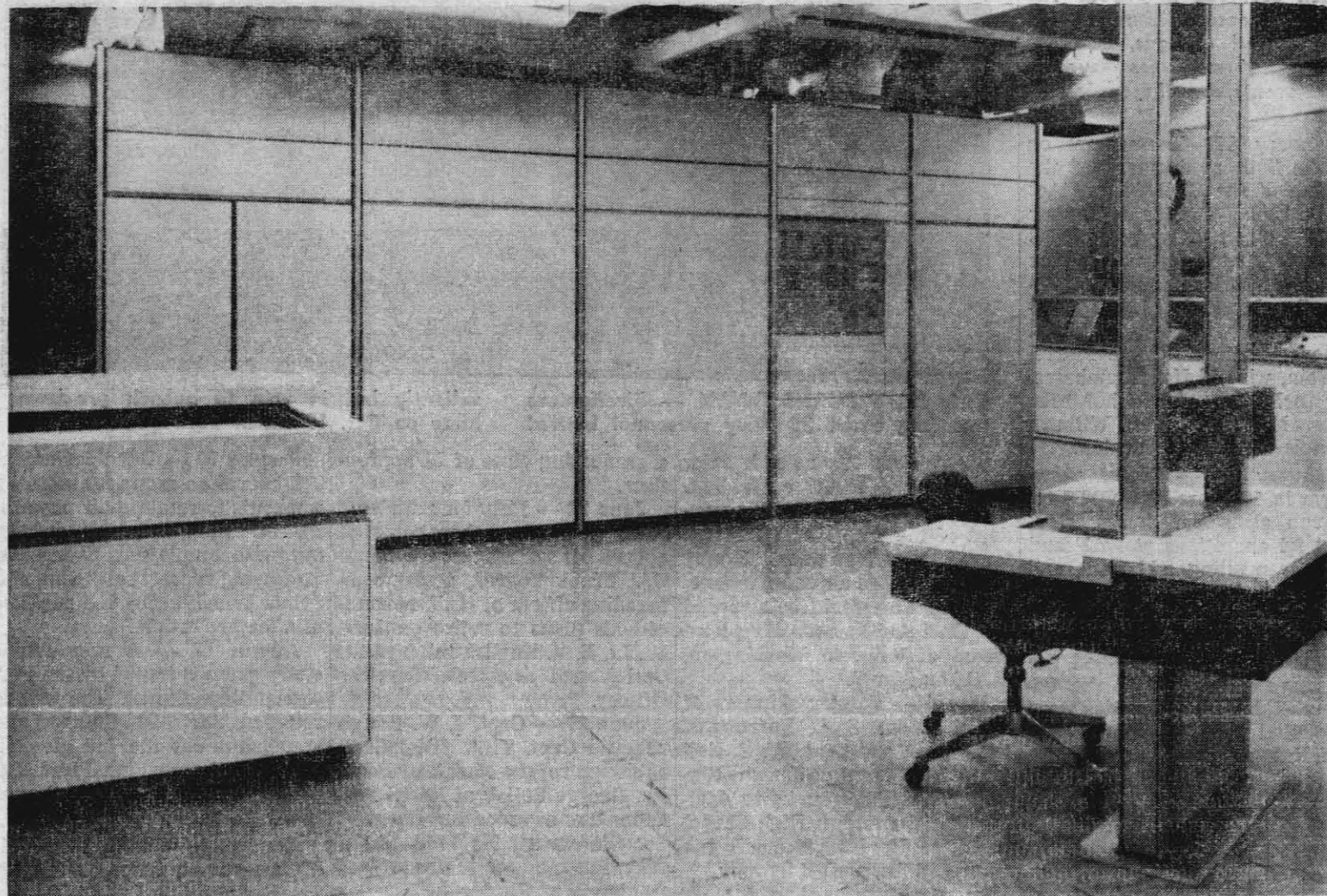
First Conceived by Navy Scientists
NOTS's Hydrodynamic Simulation Facility, first conceived by Navy scientists in 1944, provides a simulated water environment for guidance and control systems in research, development and evaluation of underwater ordnance. The basic tools are the digital computer, analog computers and flight tables. The simulation process must provide a solution from which a realistic appraisal of a torpedo's capabilities can be made.

Stages in a Simulation
The stages in a typical simulation were run as follows:

1. The torpedo enters the water under initial conditions that are controlled according to the corresponding target. The torpedo searches for the submarine in the same way it would in the water.

2. Initiation of the transmit pulse is controlled by the torpedo. Once the pulse is transmitted, a series of acoustic equations are solved in both the analog and the digital computers. The output of these equations is a voltage equivalent to the sound pressure that would have existed at the phase of the transducer if the transmission had occurred in the water.

3. The computer dc voltage is converted to the appropriate torpedo frequency and the amplitude and phase characteristics of this voltage are fed back to the torpedo's guidance system (acoustic panel) for amplification and processing. This panel then

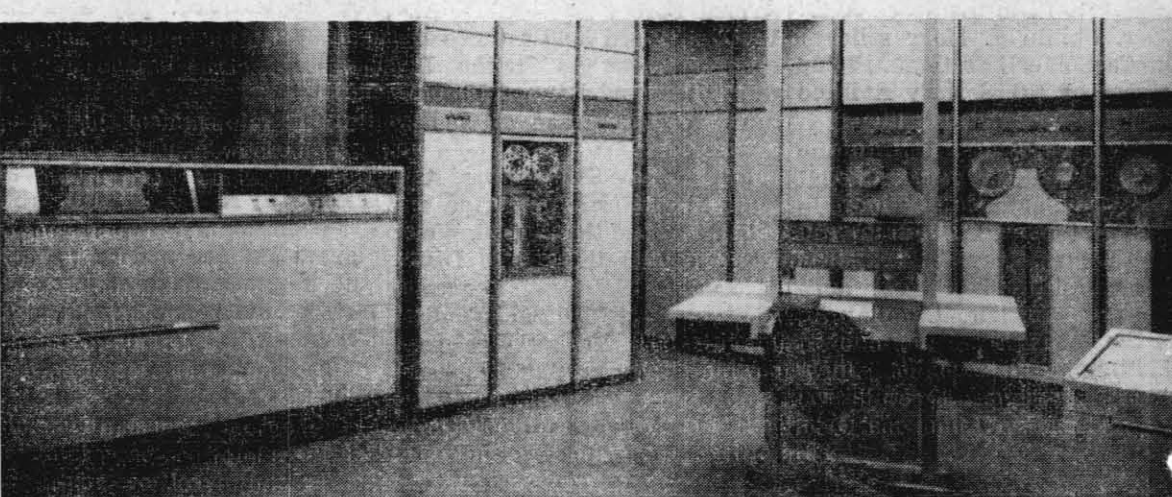


THE UNIVAC 490 DIGITAL COMPUTER, in the NOTS Pasadena Hydrodynamic Simulation and Computer Center, is used to generate, in real time, acoustic reflection from a submarine which is then output to a torpedo. It is also used as general purpose scientific computer. Console at right is for human-computer communication.

determines what the torpedo's response to the echo or target noise will be.

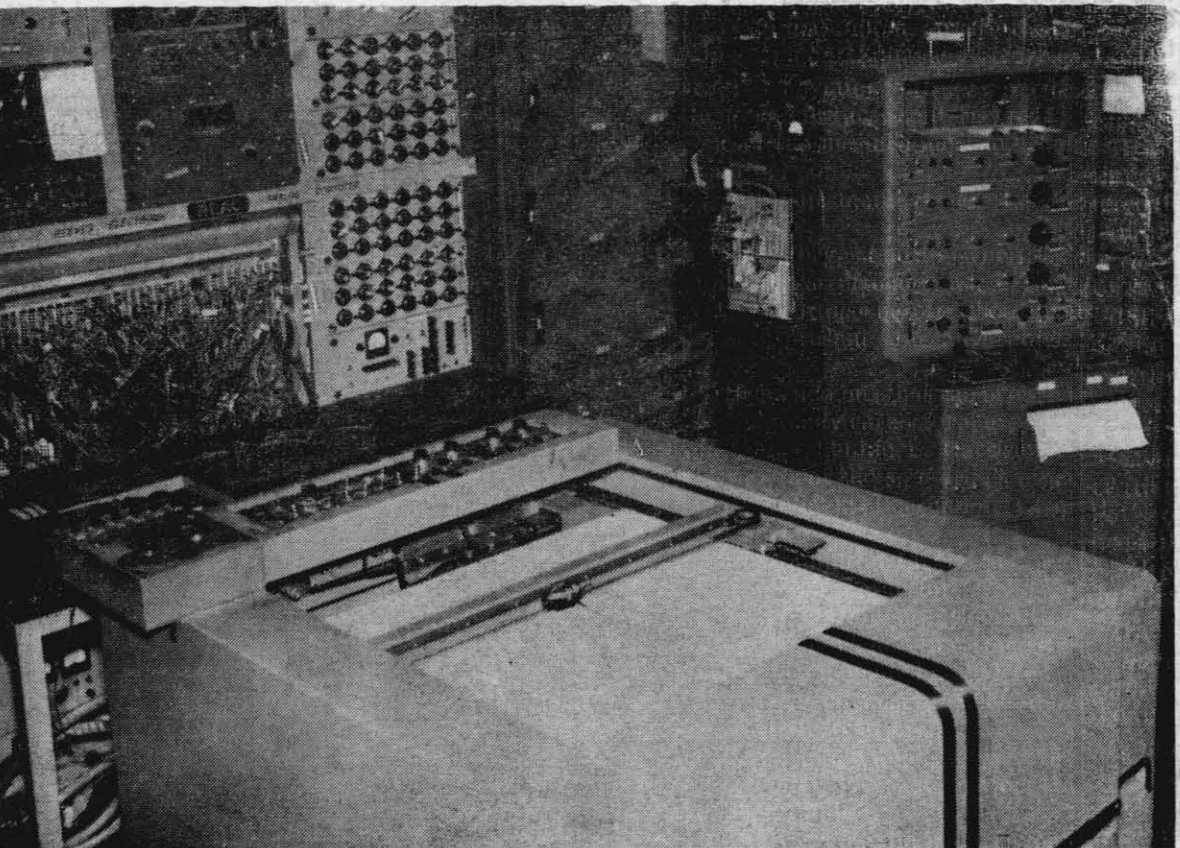
4. The command signals from the guidance system are sent to the control system which converts these control commands into rudder and elevator positions.

5. The rudder and elevator deflections are measured by electrical pick-off devices and fed into the computer solving the hydrodynamic equations of motion. In response to the rudder and elevator, the computed solution of these equations is fed as a servo command to the flight table which responds in a manner analogous to the response of the torpedo in the water, and the torpedo motion-sensing elements mounted in the table experience



HIGH-SPEED PRINTER, paper tape, and magnetic tape input-output equipment of the UNIVAC 490 are helping solve previously unanswered problems in undersea warfare.

the forces and moments comparable to those that would have occurred in the water.



SIMULATOR AND SOLVER — Electronic's Associates 231R and 400 computers are used to solve the acoustic homing portion of the simulation, simulate the target submarine and solve acoustic equations. Graph in foreground tracks the entire test run.

6. This process is repeated continuously for the duration of the run time of the torpedo or until a hit is achieved.

Now with the inclusion of the UNIVAC 490, the acoustic detection capabilities of the torpedo are increased manifold in the simulation process.

The best way to evaluate the technique described here is to see how accurately this complex simulation duplicates water results. A comparison of recorded runs shows almost perfect simulation. The torpedo runs were made at the Naval Ordnance Unit, Key West, Florida. This correlation was within the accuracy of sea-run recording. The degree of simulation was remarkable, especially since exact duplication of simulated runs is practically impossible because of randomness in torpedo operation and because of variations in the time sequence of the echoes from one run to the next.

Success Is Undeniable

The success of the simulation analysis is undeniable, Maudlin says, and the saving in research time and money is enormous. Even more important, progress in antisubmarine warfare is greatly accelerated by the simulator's pointing the way to the development of optimum weapons for the Fleet.

'Burger Still Tops As Food Item In America

Hamburger is still king of the American table, and hot dogs have grown up with the age of sophistication. You'll eat at least 168 pounds of various kinds of meat in 1963, but pork will top the list.

A 2-man team of Navy meat experts offered these tidbits of information to their China Lake audiences this week during their visit here in conjunction with a newly developed "customer service" Commissary Store program.

On Lengthy Tour

It was the first such visit here by Master Chief Commissaryman Joseph C. Stratton and his partner, Chief Commissaryman Samuel E. Ruffin. They're on a tour of Navy commissary stores throughout the western states and Pacific islands.

Purpose of their visit, according to Stratton, an 18-year veteran of submarine cooking, is "to assist commissary personnel in providing patrons with added quality at lower costs."

Hamburger, according to Stratton, reigns as the most appealing form of meat, simply because of its many forms of preparation. "In our fast-paced world today, housewives have learned to incorporate simplicity into their meal preparations. Hamburger fills the bill.

Royal Hot Dogs

"And, hot dogs started acquiring glamour when Eleanor Roosevelt served them to the King and Queen of England during their visit to America in 1937.

"They're one of the hottest items going in cocktail circles," he joked.

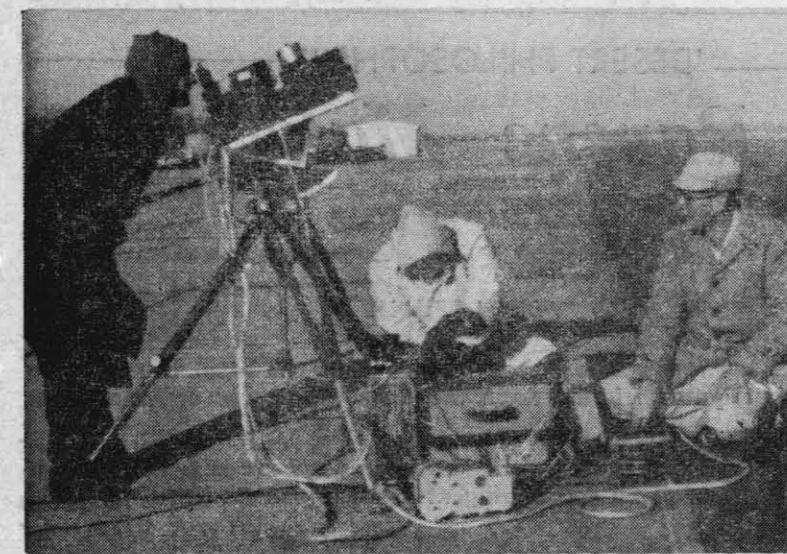
Stratton and his teammate arrived here Monday for a week long visit from the San Francisco Bay area.

"Believe me, your commissary store prices are below any of those stores we toured last week. And frankly, the customer service programs conducted by the China Lake outlet are outstanding.

"We'll take with us many more ideas for improving customer satisfaction than we leave behind," stated Stratton.

Prices On Corners

Discussing their program with members of the CPO Wives Club,



BRRRRR WEATHER — Members of AOD's Radiometry Branch (l-r) Leonard G. Terral, M. Wayne Claunch, and John D. Creclius are shown on location at the Peconic Airfield on Long Island measuring radiometry of aircraft.

AOD Group Conducts Tests At Long Island

While Station employees at China Lake were basking in shirt sleeve 70 degree weather from Dec. 6th to the 20th, a five-man group from the Aviation Ordnance Department's Radiometry Branch was conducting tests in New York State's freezing weather.

Huddled on the tip of Long Island at Grumman Aircraft Company's Peconic airstrip measuring the radiation pattern of jet aircraft in freezing weather — with 25 knot winds, rain, sleet and snow — were Bill Arriola, Leonard G. Terral, M. Wayne Claunch, John D. Checlius, Paul Mutschlechner and Joe Shannon, MT3.

It was just another day's work to Paul Mutschlechner, project leader, and his hardy group of desert men, for they have ranged the nation in making radiation measurements of aircraft with a special wide angle spectral radiometer developed by the Radiometry Branch of AOD.

The group's work at Peconic included the radiation measurements of Boeing 707s, Douglas DC-8s and Convair 990 aircraft. Ephraim Regelson, Radiometry Branch Head, reported that the group received excellent cooperation from TWA, Pan American and American Air Lines, who flew their planes according to the Radiometry Branch's prescribed flight patterns.

Special plaudits went to Grumman personnel Robert Botwin and Robert Marshall and others who kept the runways free of ice and snow during the tests.

The measurements conducted by the NOTS group will add new information to methods designed to achieve a reduction of the vulnerability of aircraft to infrared ordnance.

Previous work by the group has included the radiometry of ICBM missiles at Vandenberg Air Force Base and also missiles at Cape Canaveral. In addition the group has conducted measurements of most military aircraft and commercial aircraft from 707 jets to Piper Cubs.

UCLA Spring Courses: Science and Math

Two Education Courses scheduled under the UCLA Spring Semester Program are "Methods of Teaching Science in Elementary Schools" and "New Mathematics Curriculum in Public Schools."

First meeting for the science course is tonight at 7 p.m. in Room 14B, Murray School. Lloyd Brubaker is the instructor.

Classes for the mathematics course will be held Friday, 7-10 p.m. and Saturday, 9-12 a.m., beginning Jan. 18 and ending May 16 (alternate weekends) in Room 41, Murray School. Grant C. Pinyney is the instructor.

The fee for each of the 2-unit, 30-hour courses is \$30.



MEAT EXPERTS—Navy CPOs visiting Station this week as team of experts gave Business and Professional Women (left) Mrs. Stella Grieg and Mrs. Louise Payne tips on meat preparation. Chief Commissaryman Samuel E. Ruffin (left) and Master Chief Commissaryman Joseph C. Stratton address meetings of various organizations during week.

Navy Wives Club and Professional Business Women's Club this week; Ruffin noted that packaged meats will bear price labels only on the corners of package in the near future.

"This will enable customers to see precisely what they are buying.

"And, hamburger will be machine-packaged in 1-pound portions. This is for the benefit of patrons who do not need more than that amount for one meal," he explained.

Ruffin, an ex-destroyer cook, said that meat sales total nearly 22 per cent of overall grocery expenditures in the average China Lake family.

Commissary Aims
"That's why we're here. The commissary is making every possible effort to provide its patrons with the best product at the lowest cost. The top level managers

realize this effort should incorporate ideas of experts not attached to their particular outlets," he related.

Responding to questions from their audiences, the visiting experts said that "a tremendous savings could be represented in the family budget through a more careful food preparation.

"Cooking at proper temperatures is one example," points out Ruffin. The hotter the oven, the more a roast will shrink."

He estimates that a fifty-per cent loss is represented in many instances in family grocery budgets because of faulty preparation of meats.

Continuing their travels this Saturday, Stratton and Ruffin will embark on a journey that by mid-year will include visits to commissary stores throughout the Pacific Ocean and Western Pacific areas.

Yule Spirit Still Glows For Handicapped Scouts

This is a story about a spirit of Christmas that won't die. Its main elements are the officers and men of the Navy's Air Development Squadron-Five based at China Lake and a band of crippled youngsters who are members of Boy Scout Troop 414, one of the nation's most unusual scouting units.

All of its members are handicapped.
The story starts when the squadron's officers and men chipped in just before Christmas to buy presents for an orphan's home.

"It turned out that the orphans were already cared for," explained young Lonnie L. Garrison, a member of the squadron's nine-man Enlisted Recreation Committee.

The committee turned to Chaplain R. C. Fenning for a solution to their problem. Committee members reasoned that since the money had been donated for a charitable purpose, it should be spent that way.

Chaplain Fenning advised the group that Boy Scout Troop 414 needed funds.
The story should properly end after a \$100 check was presented to Scoutmaster James O'Dake, Jr., and his assistant, Bill Donaldson, both of whom are handi-

capped.
Throughout the afternoon last Friday, the young scouts were feted to an "open house" party that included cake and ice cream, movies and a tour of the squadron's work areas.

Billy Jackson, another member of the Recreation Committee, said the party was a "smashing success". But, it was only a start in the gifts that are yet to come.

Several members of the squadron have "unofficially" adopted the scouts, offering aid as needed. The group will lend a hand to the youngsters throughout the year ahead.
The \$100 check, by the way, reopened the troop's bank account which had been closed the day before for lack of funds.
Commander Joseph E. Schwager, executive officer of the squadron, said his men had learned a very important lesson last Friday.
"It's a wonderful feeling to enjoy the spirit of Christmas throughout the year!"



SETS THE PACE—VX-5 bluejacket Lonnie Garrison plays host to handicapped youngsters (left) Chester Finstead, Jr., 14, and Ruby Eastman, 11, during "Open House" fete last Friday. Local squadron tossed party for Troop 414 and handicapped children on Station, presenting the Boy Scout troop with check for \$100.

