



PRODUCTION SHOT — Blandy Ave. is setting for scene starring Clint Degn and Sue Hardy in the "Twenty-Fifth Hour." Presentations Division's production crew Everett Baker, Claire Grounds, David Bielawski, Aladar Klein, prepare for re-take. Film debuts at Station Theatre Tuesday eve.

National Bridge Game Nets \$144 For Charities

John and Jeannine Spessard of Trona were the overall winners in the National Charity Bridge Game held last Friday at the Community Center.

Seventy-two players participated in the annual benefit games here, resulting in \$144 being added to contributions for the national headquarters of ACBL for charitable purposes.

Dr. Martin Kaufman and his wife, Ethel, of China Lake, were second in the competition, followed closely by Charles and Doris Dye. Fourth and fifth place were shared by the teams of Joe Tremont-Betty Doig and Richard Hull and Terry Zwerski claimed sixth place.

Winners of the North-South Section A game were Bob Driggs and Scotty MacLaughlin; June Martin and Borghild Ellington were second; Tom Hagar and Mary Higgins, third, and Lillian Fojt and Milton Neufeld, fourth.

Section B winners in EW position found Frank Lint and Glennrose Symington placing second, with Charles and Joan Lines a close third. Fourth place was won by the team of Lucille Young and June Brown.

In the NS group, third place was captured by Esther and Robert Rountree, and fourth by Bill Yetter and Bob Sullivan.



CERAMIC WINNERS — Lillian Fojt and Ginger Hinton display handiwork which won them first place honors in the 16th Ceramic Show held at Long Beach. Ladies were sponsored by Dobbies' Ceramics Studies of China Lake.

AOA Post Holds Dinner Meeting Thursday Evening

The China Lake Post of the American Ordnance Association will hold its first dinner meeting of the new 1965 program series Thursday, March 25, starting with a social hour from 6:30 p.m. to 7:30 p.m. at the Commissioned Officers Mess.

The program will feature George Silberberg speaking on "Project 63," an account of the scientific aspect of the Mt. Ararat expedition of which Silberberg was a member.

According to Earl Ellington, AOA vice president and program chairman, Ray Reed and Carl Hamel were appointed to serve as program coordinators for the association's quarterly field trips and monthly meetings.

AOA dinner meetings are scheduled for the third Thursday of each month, with a luncheon on the first Tuesday.

AOA members will tour the Los Angeles plant of the Norris, Thermador Corp., Products Division, March 30, and see ordnance hardware in production — some of which relates directly to the NOTS effort, Ellington said.

Reservations for AOA members, their wives, and guests for the March 25 dinner meeting should be made by calling Ext. 71403, or mailing the amount of \$3.50 per ticket to the post president, Capt. Ronald Jensen, USAF, 2036 Michelson Lab.

Memorial Society To Meet Thursday Evening

The Kern Memorial Society will hold its annual meeting at 7:30 p.m. on Thursday, March 25, in Room "D" of the Community Center.

Agenda includes annual report by the Society's president Richard Carlisle, introduction of new directors, and showing of the CBS film, "The Great American Funeral."



DR. W. L. MASTERSON, associated with department of chemistry at University of Connecticut, is at China Lake on sabbatical leave. Assigned locally with Research Department, Chemistry Division, he is currently engaged in basic research programs.

Two More Perfs For 'Thieves Carnival'

"Thieves Carnival," the modern French farce about three small-time swindlers who attempt to move into high society, will be presented again tomorrow night and next Friday.

The production by the Desert Division of Bakersfield College, which opened last weekend, features "open staging" with the audience on two sides of the stage. The staging permits only 150 seats, so tickets should be bought in advance.

Curtain time is 8:30 p.m., and tickets are \$1.25 for adults and 75 cents for students. They may be purchased at The Gift Mart in Ridgecrest or at the door at Burroughs auditorium.

NOTS Researchers Reveal Findings in Porpoise Study



Vol. XX, No. 11 NAVAL ORDNANCE TEST STATION, CHINA LAKE, CALIFORNIA Fri., Mar. 19, 1965

Hydrodynamics, Physiology Area Are in Program

How can man effectively communicate with a porpoise . . . and can this "language" be conducted in both directions?

Can man and the porpoise work as a team in the ocean? Is there a hydrodynamic value in the porpoise that may someday be applied to man-made designs?

The answers to these questions and more were revealed by the Navy this week in its first public disclosure of studies being made at the Marine Biology Facility at Pt. Mugu.

The joint NOTS-Pt. Mugu program is broken down into four major areas of investigation, with five NOTS scientific personnel engaged in producing data.

Working under the direction of Dr. Wm. B. McLean, NOTS Technical Director, the program's aims are:

1. Find out the degree of or limits of communication from porpoise-to-porpoise and man-to-porpoise.
2. Study range of sounds emitted and the degree to which they can be shaped to resemble man-made sounds.
3. Work out man-animal team operations similar to those accomplished with dogs.
4. Hydrodynamic studies: how fast can a porpoise swim? And, is there anything occurring that would shed light on designs?

In its initial demonstration Thursday for southland newsmen, officials conducted demonstrations in porpoise pools at the facility and in the lagoon that adjoins it.

"Echo Locating" One of those engaged in the studies, Dr. C. Scott Johnson, explained his work in areas related to "Echo Locating" or sonar ability of the porpoise.

Using the Atlantic, bottled-nosed porpoise for his research, the former research associate at Chicago's Enrico Fermi Institute demonstrated the sonic abilities of "Salty," one of the experimental animals in captivity.

Using fish as a reward for accomplishment, "Salty" retrieved a series of articles, each composed of different qualities and shapes, on command. Rubber suction cups were placed over its eyes, in each instance, to demonstrate the use of the animal's sonar system in identification and retrieval of the article.

A physicist, Johnson has designed and developed an electronic programmer used in conjunction with his investigations.

Data is transcribed as "Salty" performs his mission. The exacting results render a cumulative and consistent pattern of information—all contributing to the store of knowledge essential to the development of applied values.

May Transmit Intelligence Another investigation concerns transfer of information between porpoises.

One investigator believes that porpoises, unlike other animals, may transmit intelligence between each other related to significant environmental elements. Two porpoises are undergoing

Dr. McLean On TV Tomorrow, Tells Porpoise Study Progress

Dr. William B. McLean, NOTS Technical Director, will appear as featured guest on the "Survey '65", NBC television program tomorrow evening at 7 p.m. via Channel 4.

He is appearing in conjunction with the premiere of "The Dolphins That Joined the Navy," a news documentary film produced by the Station.

During a studio interview with announcer Bob Wright, Dr. McLean explains the Navy's purposes in conducting porpoise studies and its achievements since the program was begun.

The color film portion of the program was shot at the Marine Biology Facility, under the direction of Otto Lang last year.

Original porpoise studies were conducted by the Station under Dr. Rene Engel, Tom Lang, associated with NOTS Pasadena, Hydrodynamics Group, is one of those credited with much of the data gained through the years on porpoise characteristics.

"J" Bibby, Public Information Officer here and NOTS liaison officer for the filming of "The Dolphins That Joined the Navy," said the movie is now under the supervision of the Navy Chief of Information and will be sent to every Naval Reserve Public Information Officer and to all Naval Districts for showings through the nation.



DR. WM. B. McLEAN

'65 Summer Work Rules About The Same as in 1964

Rules governing summer employment in federal agencies this year will be about the same as last year's, according to the Civil Service Commission.

Summer employment is any temporary work starting (entrance on duty) between May 1 and September 30, 1965.

As was the case last year, agencies will be barred from hiring for summer jobs the sons and daughters of their own civilian employees or uniformed-service members. This year the prohibition will not apply if the son or daughter is eligible for placement help under the Commission's Separated Career Employee Program. It also will not apply where agencies must meet emergency work situations such as in fires, floods, earthquakes, etc.

The prohibition will apply throughout each agency regardless of where the parent is employed or where the son or daughter seeks employment in the United States, but under CSC's Rules, Departments of the Army, Navy, and Air Force will be considered separate agencies. Moreover, the prohibition will apply without regard to the age of the children and whether they are part of the parent's household.

(Continued on Page 4)

SHOWBOAT

FRIDAY MARCH 19

"THE CADDY" (96 Min.)
Dean Martin, Jerry Lewis
7 p.m.
(Comedy) Flashback story tells how a top New York song and dance team becomes popular . . . via the golf tournament route. Imagine Jerry as a caddy? (Adults, Youth, Mature Children.)

Shorts: "A Friend in Tweed" (7 Min.)
"Best in Show" (10 Min.)

SATURDAY MARCH 20

—MATINEE—
"ERIK, THE CONQUEROR" (82 Min.)
Cameron Mitchell
1 p.m.
Shorts: "High Divin' Harp" (7 Min.)
"Cody of the Pony Express" (16 Min.)
—EVENING—
"TOMB OF LIGEIA" (88 Min.)
Vincent Price, Elizabeth Shepherd
7 p.m.
(Horror in Color) Edgar Allan Poe's creepy story of a man's dual personality, influenced by his dead wife's lasting curse. Black cats and castles! (Adults, Mature Youth.)

Shorts: "It's Nice to Have a Mouse Around the House" (7 Min.)
"A Report From San Juan" (18 Min.)

SUNDAY-MONDAY MARCH 21-22

"CRACK IN THE WORLD" (96 Min.)
Dana Andrews, Keiron Moore
7 p.m.
(Science-Fiction in Color) So realistic, you'll shudder! A land-based "project Mohole" creates a chain reaction fissure crack that defies scientist's efforts to stop it. Technically superb and fast-paced thriller. One of the best. (Adults, Youth.)

Shorts: "Trout Stream" (10 Min.)

TUESDAY-WEDNESDAY MARCH 23-24

"SEND ME NO FLOWERS" (100 Min.)
Doris Day, Rock Hudson
7 p.m.
(Comedy in Color) Laugh away as hypochondriac Rock believes his days are limited and his buddies sorrowfully arrange his final affairs, including picking out a new mate for his widow-to-be, Doris. Bright and funny every minute! (Adult.)

Shorts: "Twenty-Fifth Hour" (27 Min.)

TUESDAY ONLY

Story of a young engineer and his wife who come to work and live at NOTS. Made at NOTS, about NOTS, for NOTS.
Shorts: "Sky-Napper" (7 Min.)

WEDNESDAY ONLY

THURSDAY-FRIDAY MARCH 25-26

"FATE IS THE HUNTER"
Glenn Ford, Suzanne Pleshette
7 p.m.
(Drama) Interesting insight to an airline crash investigation as operation's head, Glenn, methodically reconstructs every facet of the flight. Flashback sequence includes a song by Jane Russell. Uniquely different film. (Adults, Youth, Mature Children.)
Shorts: "Heaven Scam"

What the man who has everything needs is help with the payments.

NOTS Film Story Tuesday Evening

(Continued from Page 1)

effects as well.

The film was produced as a visual aid supplement for members of the Station's technical departments who talk each year to student groups at West Coast universities on work and recreation at NOTS.

Wedding bells will add a footnote to the NOTS film when its star players, Clint Degn and Sue Hardy, make it for real with marriage ceremonies on March 28.

Acey-Deucey Dance Friday and Saturday

Ron Newman, one of the country's outstanding guitar leads, will bring his popular versatile, Hustlers Dance Band to the Acey-Deucey for a two night stand this Friday and Saturday.

The group composed of Dave Wilkie, rhythm guitar, Jim Schaus, bass guitar, Jim Cribbs, piano and vocals, Gary Olinger, drums, and Newman will play from 9 p.m. to 1 a.m. each night.

CROSSWORD PUZZLE

Answer to Previous Puzzle

ACROSS

- 1-Clenched hands
- 6-Dull-witted person
- 11-Keenly secure
- 12-Vegetable (pl.)
- 14-Cronom
- 15-Unit of Chinese weight
- 17-Ripped
- 18-Gratuity
- 20-Long and slender
- 23-Shallow vessel
- 24-Wine cups
- 26-Cheap street show
- 28-Proceed
- 29-Amount at which a person is rated
- 31-One who saves
- 33-Protective shield
- 35-Heavy blow (colloq.)
- 36-Lawmaker
- 39-Maphis
- 40-Grates
- 42-Preposition
- 43-Kind of wood
- 45-Tissue
- 46-Distant
- 48-Grates
- 50-Edge
- 51-Border on
- 53-Server
- 55-Compass point
- 56-Slumbers
- 59-Makes amends
- 61-Slaves
- 62-Temporary shelter (pl.)

DOWN

- 1-Favorite daughter of Mohammed
- 2-Conjunction
- 3-Place
- 4-Former Russian ruler

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DR. HUGH W. HUNTER, center, new head of Research, is briefed by H. G. Wilson, Assoc. Technical Director, and Dr. Gil Plain on Department projects, as he took over duties Monday. Dr. Hunter was head of Code 45 from 1956 to 1959.

'The Twenty-fifth Hour'

Film Story About NOTS At Station Theatre Tues.

Next Tuesday evening Station movie goers will have an opportunity to see a film made at NOTS, about NOTS, for NOTS. Titled "The Twenty-Fifth Hour," it is the story of a young engineer wrestling with the problem of whether he made the right decision in coming to China Lake as a junior professional electronics engineer.

Bill Newman, the engineer, is played by Clint Degn. His attractive wife, Wendy, is played by Sue Hardy. The young engineer's boss, Jack Logan, is played by David Bielawski, known to local theater goers for his fine work in the Bakersfield College productions of "Oklahoma" and "Death of a Salesman."

In addition, local movie goers will recognize many China Lake people who appear in the supporting cast.

The entire picture was photographed here at China Lake by the Presentations Division of the Technical Information Department.

Producer-Director of the film was Everett Baker. Clare Grounds of the TID Documentary Film Branch handled the photography.

Support assistance for the film was by Bill Morrison's F. M. Productions of Hollywood. The script was written by Barry Shipman based upon a treatment by Frederick Beelby.

Eugene Horstmann handled the lighting. Aladar Klein not only edited the picture but dubbed the music and sound

(Continued on Page 8)

NAF Drill Team Wins Orange Show 1st Place



NAF'S DRILL TEAM leader Preston L. Beebe, AT1, is congratulated by skipper, Capt. Robert R. Yount, as Beebe shows him the first-place trophy the drill team won last Sunday at the National Orange Show's Armed Forces parade at San Bernardino. Eighteen drill teams took part in the parade, the largest in the show's history.

CHAPLAIN'S MESSAGE

The Pause That Refreshes

By CHAPLAIN MARK E. FITE



The title is a slogan of the Coca Cola Company. It is seen and recognized almost universally as the invitation to try a drink that may be satisfying and worthwhile.

We cannot deny that a pause in the rush of routine daily life is valuable in so many ways. Coffee breaks have become the rule. The tempo of life, the noise, the news, and the program often does take its toll on our effectiveness by dulling our senses to what is of prime importance.

Moments of calm reflection are needed. Time to think of why we are here; why we do what we are doing; what we are and what we hope to become. These moments may come at unique times in the day. They may be while engaged in certain jobs of work; on travel to and from work, or anywhere in your particular schedule. But you do have such moments, and they may not be wasted.

I suggest a pause that refreshes, for in that moment of reflection; many things that are heretofore undiscovered in your potential may be revealed.

"Be still and know that I am God." (Psalm 46:10).

Episcopal Bishop To Preach At All Faith Chapel

The Rt. Rev. Sumner Walters, Bishop of the Episcopal Diocese of San Joaquin, will be the guest minister at the 11 a.m. Protestant Services at the All Faith Chapel this Sunday.

The noted churchman is in his 22nd year as Bishop of San Joaquin. Under his leadership the diocese has doubled in size.

Bishop Walters is past president of the Pacific Province of the Episcopal Church and currently president of the board of trustees of the Church Divinity School of the Pacific, the seminary that serves the west coast.

A reception hosted by the ladies of the Protestant Congregation and St. Michael's Parish will honor the Bishop following the 11 a.m. services.

Engineers' Meeting Set For Wednesday Eve

The Desert Empire Chapter of the California Society of Professional Engineers will meet at 6 p.m. Wednesday at the Hide-away.

Featured speaker will be Glenn R. Birdsall, field engineer for the Endevco Corporation.

He will speak on the theory and application of charge amplifiers and show a film on accelerometer calibration.

PROMOTIONAL OPPORTUNITIES

Present Station employees are encouraged to apply for the positions listed below: Applications should be accompanied by an up-to-date Form 58. The fact that positions are advertised here does not preclude the use of other means to fill these vacancies.

Physicist (Electronics) or Electronics Engineer (Instrumentation), GS-9, 11, or 12, Code 4531.

Physical Science Technician (Chemistry or General), GS-5 (two positions), Code 4539. File applications with Betty Fowler, Bldg. 34, Rm. 26, Phone 71648.

Stockman, \$2.79 to \$3.03 per hour, Code 259-Records, Issues, Stores, Inventories and maintains stock records on various classes of medical equipment, supplies, etc. for the Station Hospital.

Qualifications: Must have had a minimum of one year progressively responsible experience in storage and warehousing operations. File applications with Pat Detting, Bldg. 34, Rm. 28, Phone 72218.

Clerk (DHT) or Clerk-Typist, GS-3 or GS-4, Code 3043-The incumbent will act in a clerical capacity to the Branch performing routine office duties such as the typing and/or transcribing of official correspondence, reports, memoranda, plus maintaining the branch files, timekeeping, travel, and other duties that are necessary for the smooth operation of a branch office.

File applications for above with Joan Lines, Bldg. 34, Rm. 34, Phone 71514.

Editorial Clerk (General Typing), GS-5 or 6, Code 3566.

File applications with Mary Morrison, Bldg. 34, Rm. 32, Phone 72022.

Technical Writer-Editor, GS-1063-9 or 11 (2 vacancies), Code 7311-Position is located in Editorial Branch, Publishing Division, T.I.D. Incumbent has the responsibility of editing and writing technical reports for branch.

Voucher Examiner, GS-540-3, Code 1753-Position is located in Public Voucher Branch, Central Staff. Duties involve responsibility for the examination and computation of public claims and vouchers, training assignments in examining work of a higher level than that which incumbent routinely performs, and incidental typing tasks done in conjunction with the basic examining.

File applications with Janet Thomas, Bldg. 34, Rm. 26, Phone 71577. Deadline for filing is March 26.

NAVY OVERSEAS VACANCIES

Mechanical/Marine Engineer, GS-5, 7, 9, 11, 12, Electronic Engineer, GS-5, 7, 9, 11, 12, Reporter, GS-8, Okinawa; Electrician (Power Plant), Guam, Civil Engineer, GS-11, Architect, GS-12, Thailand.

File applications for above with: Navy Overseas Employment Office (Pacific), 50 Fulton Street, San Francisco, Calif. 94102.

'DESERT PHILOSOPHER' Springin' One On the Flowers

By "POP" LOFINCK



Let's talk about the weather. Everybody does. Be happy about the recent spring rains that added up to about an inch in this area.

There is always more moisture, rain and snow in the north area of NOTS than in the China Lake housing area. Fall rains and snow are more productive of vegetation in the desert than spring rains. In fact spring rains are not very effective without the previous fall rains. (Like winter wheat of the midwest).

The seeds are scattered in the fall — rains start the seeds germinating — winter comes and the seeds go dormant. Moderate spring rains will then bring out the vegetation.

TWO SPRINGTIMES IN THIS AREA Last September, October and November the rains added up to about 3 1/2 inches in the China Lake area. There are usually two spring times in this Mojave Desert. The first comes about now — a few warm days will bring out the flowers — certain kinds will bloom profusely. Then winter returns for a period — the early flowers die.

Then comes the second springtime and different late-blooming varieties of flowers are in profusion.

If the first spring time period were delayed and merged into the second spring period without a cold break in between and the early and late flowers all bloomed at the same time, that would be something!

I suppose that is possible but not probable because the germinating time of plants depends on an inhibitor in the hard shell of the seed or the chemistry of the bulb.

FOOL 'EM WITH A REFRIGERATOR The late blooming varieties require a longer freezing period to break the inhibitor. But the late germinating plants can be fooled — if the seeds are scratched and placed in a dark cold refrigerator — they start germinating right away — I am told by authority.

Tomorrow is officially the first day of spring. But don't be too expectant — I've seen it snow on Easter on the North Range of NOTS.

The flower most sought after for photographers is the Mariposa Lily — genus Calochortus. Other common names it goes by are Star Tulip and Butterfly Tulip. There are 35 species in California; about a dozen species within a 50-mile radius of China Lake — ranging in color from vermilion red to almost white — from lavender to deep yellow.

Transparencies of these lilies are negotiable. People trade them for colors they don't have. Sort of a collector's item. Like collecting butterflies. The different varieties have different blooming periods ranging from March to July.

WHERE TO FIND DEEP VERMILION TYPE One favorite is a deep vermilion growing between 5000 and 6000 feet elevation from the top of Mt. Springs Canyon to the slope down into Junction Valley—or Echeron Valley on the map. Blooming time from April to June or maybe July.

There are several late blooming varieties of various colors on the way to Coso Peak — one pale pink that's easy to trade.

To get the best pictures go out in the early morning. The flowers are wide open. As soon as they get enough sunshine they close up. On an overcast day you might get good pictures all day.

LCDR. Shults Wins Elks Club Honor

LCDR. Lewis B. Shults, CO, NOTS Enlisted Personnel, was presented an engraved Americanism plaque at the Elk's Gold Star Awards Banquet on March 6, honoring China Lake and Ridgecrest citizens for their achievements.

Another recipient of the Americanism plaque was Don Yockey, Editor of the Valley Independent. Scrolls were awarded to the Ridgecrest Police Department, Chief George Whaley accepting, and to Deputy Sheriff Don Glennon, for outstanding work with the youth of the community.



AERIAL SHARPSHOOTER, Lt. Lloyd C. Showman, VX-5, surveys target on C-range and damage from 2000-pound bomb he dropped in over-the-shoulder release last week as part of demonstration. Release of weapon was at 6000 feet and 500 knots, landing within 175 feet from center of target. Hit was called one of the "best" ever recorded!

COM Calender Meet to Organize IWV Pony-Colt Baseball Season

Tomorrow night is Dance Night and appearing will be the fantabulous Winstrup Olesen Band featuring his lovely singer-dancer. So come on to your club ... you can't miss this one.

The Easter Bunny is busily preparing a most tempting menu of traditional fare to be served at your club from noon 'til 6 p.m. on Easter Sunday. So plan to make reservations ... it will be a delight for your whole family.

The bar opens at noon on Saturday. Drop by after your golf game.

HAVE YOU HEARD BEE BUTLER AT THE ORGAN? Just Fabulous!!! You can hear her on Tuesday thru Friday evenings. She would love to play your favorite tune—Pat Shannon

Cosmetics: A woman's means of keeping men from reading between the lines.



BURRO JOHN ROSETH takes a mighty swing at the ball in game against Tehachapi last Friday. Burroughs won that one, 1 to 0. But the local nine lost to Desert Hi on Saturday, 6 to 4. Roseth hit a homer with one man on in the latter game.

Variety of Tasks Spices WEP Work For Sharon

BOWLING NEWS

By Dick Zinke

865 Scratch

Fred Dalpiaz clouted a classy 244 game in Monday night's action and added games of 194 and 214 for a big 652 series. The Desert Playhouse still leads the field by 4 1/2 games and gave no ground by pounding out games of 997, 925 and 930 for a 2852 series. Bill Mitchell and Bob Hooper also came through with a fine 232 a piece.

Midway

Harry Myers went on a pin spilling spree and fired a grand 256 game and ended the night's play amassing a 607. Mention must also be made of John Ho's 236 and Ed Dubravsky's 226, Al Ferris' 215 and 209 for a fine 601 and Bill Johnson coming in with a 207 and a 209 for a 587 series. There was a total of 15 games of 200 or better rolled.

Women's Handicap

Charlotte DeMarco out shot the rest of the gals and took individual honors by rolling a booming scratch 234 game for a 528 series. Team honors went to the Jets with a 954 game and a 2741 series. Other good scores posted were by Mary Andreason bowling 210 and Bettie Hardy shot 200 for a 500 series.

City Tournament

Scores in the single and double events ran generally high after the first week of bowling and the squads scheduled for Saturday and Sunday will have some good scores to shoot at.

The leaders in each event at present are:

Singles: John Padgett 611 (scratch) 699 (Handicap); Walter Freitag 564 (S) and 674 (H); Ed Donohue 596 (S) and 672 (H).

Doubles: Sherm Shoaff and Larry Graham 1162 (S) and 1308 (H); R. Yarbough and Robert Pruet (1010 (S) and 1272 (H); John Trigg and Andy Bodner 1143 (S) and 1243 (H); Richard Graham and Bill Higbie 1097 (S) and 1243 (H).

All Events: Carl Ogden 556, 526, 565 for a 1947; and Ed Donohue 602, 472 and 596 for an 1898.

Good luck to the remaining squads and lets see if these Association Tournament records can be broken. Singles — In 1961 Don Mumford bowled a 773. Doubles — Bob Green and Bob Lockwood bowled a 1342 in 1955. All Events — Again 1961 Don Mumford shot a total of 1989.



WEP Student Sharon Swedblom (right) is shown the techniques of editing by her sponsor, Lonnie Cox of Code 12.

By DONNA REINHART (WEP Student Assigned to The Rocketeer)

"It's the variety in the work — that's what I like most. When I first came here I thought I'd be put on one specific project, but not so," stated Sharon Swedblom, Burroughs High School senior who is now a Work Experience Program student in the Weapons Planning Group at NOTS.

Under the direction of Lonnie Cox, her sponsor in Code 12, Sharon is experiencing the actual situations of various projects involving technical writing. Since she began her work at Michelson Lab, Sharon has had the opportunity to work in an atmosphere suited to her field of interest — technical editing.

"Working at the Lab with people who are interested in their work and mine has increased my interest in scientific writing," said Miss Swedblom.

Sharon is one of 51 WEP students who have been working at NOTS since Feb. 1.

After graduation in June, Sharon will attend Bakersfield Junior College for two years and then she will continue her education at Cal Poly, San Luis Obispo, where she will major in English.

Sharon was originally assigned to Stuart Lilly of Code 55 but was transferred to Weapons Planning three weeks ago.

UCLA REFUND CHECKS

UCLA student refund checks for the fall semester may be picked up weekdays between the hours of 8 a.m. and noon at Michelson Laboratory, Room 1004.



TOP MILITARY BOWLERS — Ten of the 12 top military bowlers who will represent NOTS in the 11ND Northern Area Bowling Tourney at Long Beach are (front row, l-r), Louis Rivera, and LCdr. Jack Miner, NAF; Bernard Crum, NOTS; Floyd Kerr and Alex Ribultan, NAF. Back row (l-r) Joe Kokosenki and Lee Allen, NOTS; Darwin Richardson, Ed Dubravsky, Burton Smith, all of NAF. Not present: Bob Powell and Mike Hruska, both of NOTS.

GENERAL MESS

- TODAY, MARCH 19
D-Clean chowder, sea food platter, milanise rice, spinach, tomatoes, sandwich bar No. 6, salads, apple pie.
S-Baked hamburger pie, French fried potatoes, mixed vegetables, kidney beans, salads, waffles.
SATURDAY, MARCH 20
B-Fruit, cereal, juice, fried eggs, breakfast steaks, waffles, syrup.
1000 Add: Frankfurters, pork and beans, ice cream, salads.
1000 Omit: Breakfast steaks, waffles, syrup.
S-Veal chops, duchess potatoes, gravy, corn, strawberry shortcake, whipped cream, salads.
SUNDAY, MARCH 21
B-Fruit, cereal, juice, fried eggs, ham slices, waffles, syrup.
1000 Add: Ham slices, waffles, syrup.
S-Roast beef, mashed potatoes, gravy, green beans, salads, pineapple pudding, ice cream.
MONDAY, MARCH 22
B-Fruit, cereal, fried eggs, crisp bacon, French toast, syrup, raised doughnuts.
D-Mulligatwny soup, grilled steak, French fried potatoes, mushroom sauce, peas, sandwich bar No. 4, salads, pineapple chiffon pie.
S-Meat loaf, potatoes, gravy, carrots, salad, ginger cookies, ice cream.
TUESDAY, MARCH 23
B-Fruit, cereal, fried eggs, pork sausage links, blueberry hot cakes, syrup, apple coffee cake.
D-Cream of chicken soup, fried chicken, potatoes, gravy, corn, sausage dressing, sandwich bar No. 1, salads, lemon coconut cake.
S-Barbecued beef tips, noodles, spinach, cabbage, salads, prune cake.
WEDNESDAY, MARCH 24
B-Fruit, cereal, fried eggs, minced beef, potatoes, French toast, syrup, iced cutlers.
D-Vegetable soup, roast beef, roast potatoes, gravy, lima beans, sandwich bar No. 2, strawberry pie.
S-Spaghetti, meat sauce, mixed vegetables, pizza, sautah, salads, French bread, molasses cookies, ice cream.
THURSDAY, MARCH 25
B-Fruit, cereal, fried eggs, corned beef hash, hard boiled eggs, hot cakes, syrup, Swedish tea rings.
D-French onion soup, grilled pork steaks, potatoes, tomato gravy, cauliflower, carrots, sandwich bar No. 3, salads, peanut butter cake.
S-Swedish meat balls, rice, boiled beans, beans, salad, peach shortcake, whipped cream.
FRIDAY, MARCH 26
B-Fruit, cereal, fried eggs, lanchon meat, French toast, syrup, cake doughnuts.

Conservation Talk At Center, Not Museum

Ardis M. Walker's talk, "Conservation: A Home-Front Crisis," co-sponsored by the Maturango Museum and the China Lake Branch of AAUW, on Tuesday, March 23, will be presented in the Community Center auditorium, not in the Weapons Display Center as previously announced.

Walker's appearance, scheduled for 8:30 p.m., will follow the regular AAUW meeting and a subsequent coffee break starting around 8 p.m. Both the social half-hour and the address are free and open to the public.

Aetna Agent To Be Here Thursday, Friday

Howard Keenan, Aetna Insurance representative, will be at the Community Center on Thursday and Friday, March 25-26, from 9 a.m. to 4:30 p.m.

The Rocketeer

Official Weekly Publication of the U. S. Naval Ordnance Test Station China Lake, California. Capt. John I. Hardy, USN Station Commander. "J." Bibby Public Information Officer. Jack G. Broward Editorial Advisor. Richard Grueneberg Editor. Budd Gant Staff Writer. Frederick L. Richards Special Assignments Staff Photographers. Jerry Williams, PH1; Paul Seaton, AC2PH; Dennis Smith, PH3; Seth Rossmann, PH3, and Ralph Robey, PH2 (Pasadena). DEADLINES: News Stories—Tues., 4:30 p.m. Photographs—Tues., 11:30 a.m. The Rocketeer receives Armed Forces Press Service material. All are official U.S. Navy photos unless otherwise identified. Printed weekly with appropriated funds in compliance with NavExos P-35, Revised July 1958. Office at 50 King St., Bldg. 00929. Phone-71356, 71655, 72082.



Christian Science (Chapel Annex)—Morning Service—11 a.m. Sunday School—11 a.m. Protestant (All Faith Chapel)—Morning Worship—8:30 and 11 a.m. Sunday School—9:30 a.m., Chapel Annexes 1, 2, 3, 4 (Dorms 5, 6, 7, 8) located opposite Station Restaurant. Roman Catholic (All Faith Chapel)—Holy Mass—7, 9:30 a.m., and 5:30 p.m. Sunday. 6 a.m. Monday through Friday, 8:30 a.m. Saturday. Confessions—8 to 8:25 a.m., 6 to 8:30 p.m. Saturday; Thursday before First Friday, 4 to 5:30 p.m. NOTS Jewish Services (East Wing All Faith Chapel)—8 p.m. every first and third Friday. Sabbath School, 10 a.m. to noon, every first and third Saturday. Unitarian Fellowship (Chapel Annex, 85 King St.)—Fellowship Meeting—Sundays, 7:30 p.m. Sunday School—10:45-11:45 a.m. Dorms 7 and 8.

Sailor Of The Month



Donald Robinson, PNSN, USNR, has had his eye on this coveted award for many months and now that he finally made "Sailor Of The Month" he is justifiably proud.

His co-workers at the NOTS Long Beach facility readily admit that he's doing a splendid job as diary personnelman.

Robinson is responsible for the all-important diary entries reflecting gains and losses of enlisted personnel.

His selection for this award was based on his outstanding accomplishment of assigned duties, excellent attitude toward the naval service, and his military appearance.

Robinson, who considers Phoenix, Arizona, his home currently resides at NOTS barracks 63, Naval Station, Long Beach.



JUNIOR PROFESSIONAL employees from NOTS, China Lake, are receiving statistics of the Variable Angle Launcher (VAL) from Bob Larson, Head, Ballistics Section (1), during an orientation visit to Morris Dam. The JP's spent the day at the Pasadena facilities, being introduced to the organization and attending briefings on current programs.



BIE DAY — NOTS Pasadena played a role in the local annual Business, Industry and Education Day by extending invitations to 35 Pasadena elementary school teachers to visit the Annex. The visitors are pictured near the ASROC missile at station entrance. Dr. J. W. Hoyt (official host for the group), Bernard Silver, Cdr. H. F. Burns and George Pollack represented the station by attending morning sessions at Hale Elementary School and the continuing program in the Pasadena High School Auditorium. The station representatives escorted the teachers to lunch then to Pasadena Annex where they were welcomed aboard by Capt. G. H. Lowe and D. J. Wilcox. Following an afternoon program, the visitors were conducted on a tour, meeting with technical personnel who explained the functions of the various laboratories.

NOTS Pasadena

VIRGINIA E. LIBBY — EXT. 638

PROMOTIONAL OPPORTUNITIES

To apply for vacancies, contact Nancy Reardon, Pasadena Personnel Division, Extension 492. A current SF-58 must be submitted when applying.

Industrial Engineer or Administrative Assistant, GS-11 or GS-12; Technical Planning Staff, — Underwater Ordnance Department, Code P801 — Preparation and maintenance of project plans for R&D programs, including scheduling and funding; implements PERT system on designated programs; makes special staff studies. Applicants should have at least one year's experience with PERT/time. PERT/cost experience is desirable.

Mathematics Technician, GS-5 or GS-7, PD 5P80013, Code P8053—Incumbent will do data processing and analysis. He devises data reduction methods, and provides technical direction to contract employees for the graphic presentation of data. Grade level will be fixed according to qualifications of applicant.



IT'S A HAPPY OCCASION for Dr. J. W. Hoyt, Head, Propulsion Division, UOD, as he receives a patent holding award of \$50 for his "Turbulent Flow Viscometer." Capt. G. H. Lowe, OinC NOTS Pasadena, makes the presentation to Dr. Hoyt.



HOSTED at Pasadena Annex last week by D. J. Wilcox, Head, UOD, (center), Capt. G. H. Lowe, OinC, Pasadena (r), and Capt. J. I. Hardy, ComNOTS (not shown), RAdm. C. A. Karaberis, Mgr. ASW Systems Project Office (l.) was here to represent ASW programs.

Bowling Battle

By Ray Hanson

The battle of the also-rans still rages in the NOTS Wednesday night bowling league, with shot and shell falling all over the greensward. The Quiet Five still lead, of course. But the Side Winders have moved into undisputed second place, two games ahead of the wounded Alley Kats in third. The Jacks and Better trail the Kats by only one game for fourth, so that the spread over all three teams is a mere three games, with no truce in sight.

High scores for the week are as follows: team series, Untouchables and Quiet Five, 2890 (tie); team game, Infirmities, 1033; men's series, Jim Henry, 637; women's series, D. Aitchison, 612; men's game, Hal Byall, 250; women's game, Bev Flynn and Jan Cardwell, 220 (tie).

My wife claims she's a perfect wife because she lets me out with the boys one night a week. Big deal! I'm a scoutmaster.

Dr. St. Amand Named to Two Disaster Research Groups

Dr. Pierre St. Amand, Head of NOTS' Earth and Planetary Sciences Division, has been named to two key groups devoted to investigations and research into earthquakes, tidal waves, and other natural disasters.

One is a State of California committee and the other is a United Nations group.

As an outgrowth of the Earthquake and Geologic Hazard s



DR. PIERRE ST. AMAND



PLENTY OF TIME FOR GOLF, NOW! — Code 55's William M. Sherlock, who retires after 35 years of Federal Service, admires favorite driver.

Bill Sherlock Retires After 35 Years Federal Service

Engineering Department's William M. Sherlock, an electronics technician, ended an illustrious 35-year career of government service last week.

Included were 13 years of military service and 22 years of Federal Civil Service, 14 of which were at China Lake.

Born in Media, Penn. Sherlock entered the Navy in 1926 and hung up his gold braided Chief Fire Controlman's uniform in 1939.

Highlight of his naval career occurred aboard the USS Indianapolis when he designed a firing key to enable President Franklin D. Roosevelt to fire the Indianapolis' 5-inch anti-aircraft batteries.

The event took place in 1933 while the President was aboard the Indianapolis on a cruise to Bar Harbor, Maine. He was the first U.S. President to fire a ship's anti-aircraft batteries.

Sherlock started his Civil Service career as an electrical inspector at Terminal Island Shipyard and subsequently at the Mare Island and Long Beach yards until 1945 when he established his own contracting business in the Los Angeles area.

In 1950 he returned to Civil Service here at China Lake with

Conference held in San Francisco last December, Dr. St. Amand was asked by Hugo Fisher, administrator of the Resources Agency of California, to be a member of the Program Committee to advise the agency and the State government on steps to be taken in the event of disasters, such as the Good Friday earthquake in Alaska last year. Dr. St. Amand flew there on the request of Governor Edmund G. Brown at that time.

The Program Committee will collect data and information, set up a clearing house of such information, and suggest research "we are not now doing," according to Fisher.

As a member of the United Nations group, the NOTS scientist will perform similar duties, but on a world-wide basis.

"If a disaster hits, some of us will be on the way to the stricken site anywhere in the world — almost immediately, certainly within 72 hours," Dr. St. Amand said.



MORE THAN 220 BOYS from the Webb School of California, at Claremont, got a real thrill watching an Air Development Squadron Five weapons delivery demonstration during their tour of the Station last Wednesday. The group was undoubtedly one of the largest

ever to visit here. And guess who played "dad" to them all for the day? VADM Paul D. Stroop (arrow), ComNavAirPac, former Station commander, that's who. At lower right is Capt. Leon Grabowsky, Station Executive Officer.

All Clubs Invited To Submit Names For Directory List

All clubs and organizations of Indian Wells Valley wishing to be listed in the 1965 Club Directory issued by the Community Relations Office are requested to notify that office before April 15.

Phone Ext. 71659 or 71575 or use the form included in the 1964 Club Directory and mail it to Code 1131. Forms are also available at the Community Center.

Information required by the Community Relations Office includes name of club or organization, name of contact, meeting time and place, and mailing address.

The Club Directory is used in the Station's Recruiting Program and in the orientation of new employees. It is considered to be of benefit to both clubs and personnel.

Famed Artist Bill Bender Here Monday

Bill Bender, nationally prominent southland artist, noted particularly for his impressive atmospheric paintings of the California and Arizona deserts, will give a painting demonstration at the regular monthly meeting of the Desert Art League, Monday, March 22, at 8:30 p.m. in the NOTS Weapons Exhibit Center. The Art League's business meeting starts at 7:45 p.m.

On display in the Combat Art section of the center will be 30 paintings of the Navy Art Cooperation and Liaison Committee, western division, 1964 exhibit, including six of Bender's canvases made at the Naval Air Station, Pensacola, Fla.

Bender's paintings for the Navy Combat Art program are titled "First Wings," "Night Fliers," "Grounded by Summer Showers," "Sunday, USN," "Headed Home" and "Where Others Fear to Tread."

He started his painting career as a protege of Jimmy Swin-



BILL BENDER

erton, famous desert painter and creator of the newspaper comic strips, "Little Jimmy," and "Kanyon Kiddies."

The public is invited to attend Bender's presentation and also view the Navy Combat Art exhibit.



VX-5 TRIPLE ENLISTMENT—Going for six, four and six, respectively, are (l-r) James A. Butner, YN3; Raymond E. Avert, ADJ2, and

Morris Hall, ADJ3. Disbursing Officer LTjg. Wilfred J. Bergeron presents them with their shipover checks.

NOTS and Pt. Mugu Scientists Join in Study of Porpoises

(Continued from Page 1) training that entails assigned tasks to perform.

The "conversation" between the animals in performing these tasks is being investigated to verify or eliminate a potential application.

"Alice" and "Dash," a pair of dolphins under close study at the facility, are pointing to another area of potential value related to man-dolphin communication.

A prerequisite to this relationship, it was pointed out, is one be immediately recognizable to the other.

Dolphin sounds are presently unintelligible to man.

Devise 'Language' Pattern
This problem area has been partially solved through the design and development of an electronic translator. Dolphin sounds fed into the translator are converted into a "language" pattern that can then be simulated by man.

These sounds, fed back into the translator, command specific actions by the animal, the completion of which brings a reward of fish.

The translator process involves a "breakdown" in both volume range and syllabic emphasis of the normal porpoise whistles, clicks and grunts.

Robert E. Bailey, now in his third year of porpoise investigation, is seeking remote acoustic control over porpoises.

His objectives are related to establishing a means for humans to transmit to porpoises over long distances and to study the degree of reliability of the porpoise's response to these commands.

The ease of sound transmission in water has greatly facilitated this particular study. Numerous sound-producing devices have undergone test and evaluation at the facility under Bailey's direction.

Tests in Open Ocean
Extremely reliable levels of performance by porpoises have been established under acoustic control, at ranges of over 400 yards to date. Bailey commented that extensive testing has also been conducted in the open ocean.

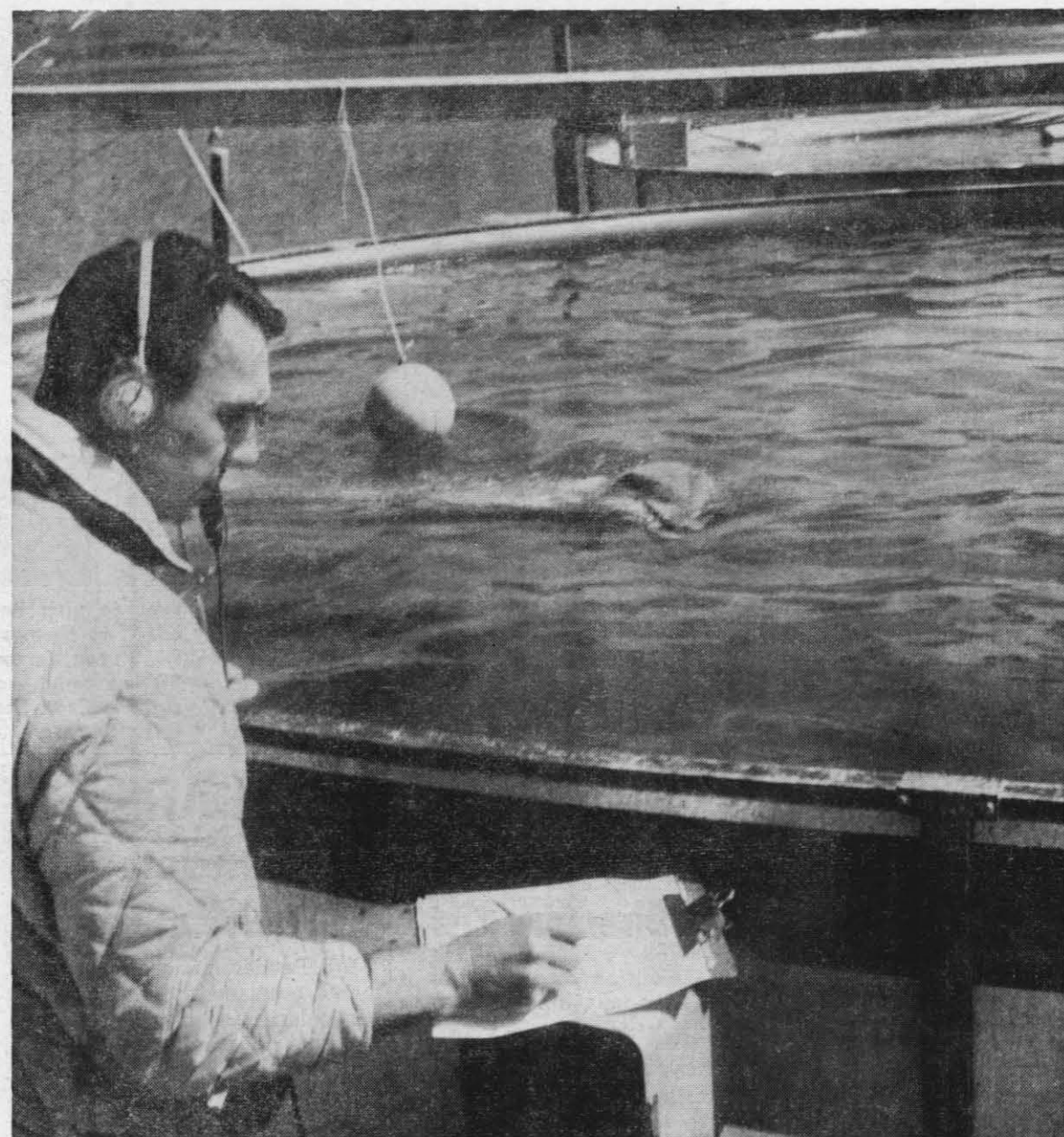
An important adjunct to this area of study is the development of a harness for porpoises. The harness enables the animal to be instrumented during performance. A secondary application of the harness is its value in the actual taming and training processes which captive animals undergo.

In the areas of hydrodynamic studies, conducted chiefly by Tom G. Lang, Hydrodynamic Group, Research Department, porpoises were observed in both closed tank and open ocean environments.

Top average speeds of up to 16.1 knots were recorded during the summer and winter of 1964 at the Oceanic Institute in Hawaii. Results of these and subsequent tests show the power output per unit body weight was equivalent to that of human beings, and the drag was equivalent to a streamlined, torpedo-like body. Large skin waves appear on the animal's body surface, leading officials to surmise that porpoises develop their own counteracting force to eliminate drag impediments.

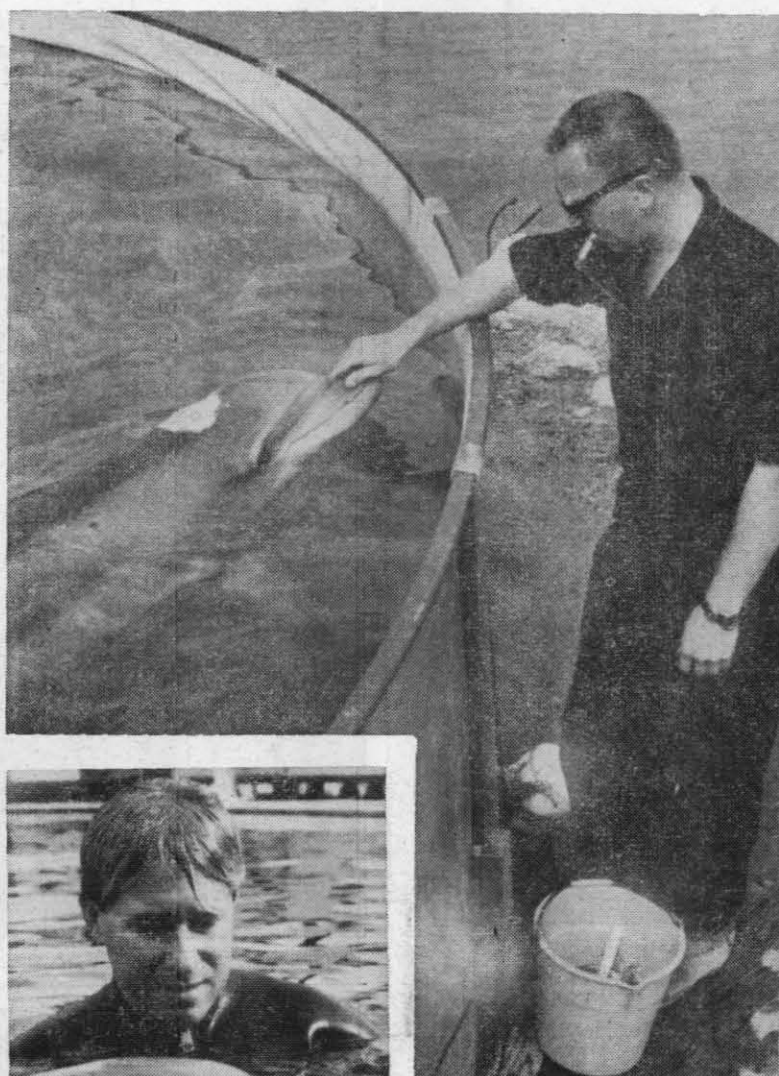
Lang noted that future tests are to be conducted on species of porpoises other than those used in the previous tests —

(Continued on Page 5)



"MAN LANGUAGE" issued in form of unintelligible sounds by researcher Ralph H. Penner to porpoise is translated electronically

into acoustic porpoise sounds, Commands issued bring fish reward when accurately performed.



HAND ON NOSE of "Salty" (above) holds animal until command is given by Scott Johnson. Removal of hand sends porpoise on retrieval mission. Ocean partners (at left) in science are "Buzz-Buzz" and Robert Bailey, NOTS biologist.



FEMALE TRAINER gives basic lessons to porpoise, using whistle as command for animal to touch nose in center of paddle she is holding.



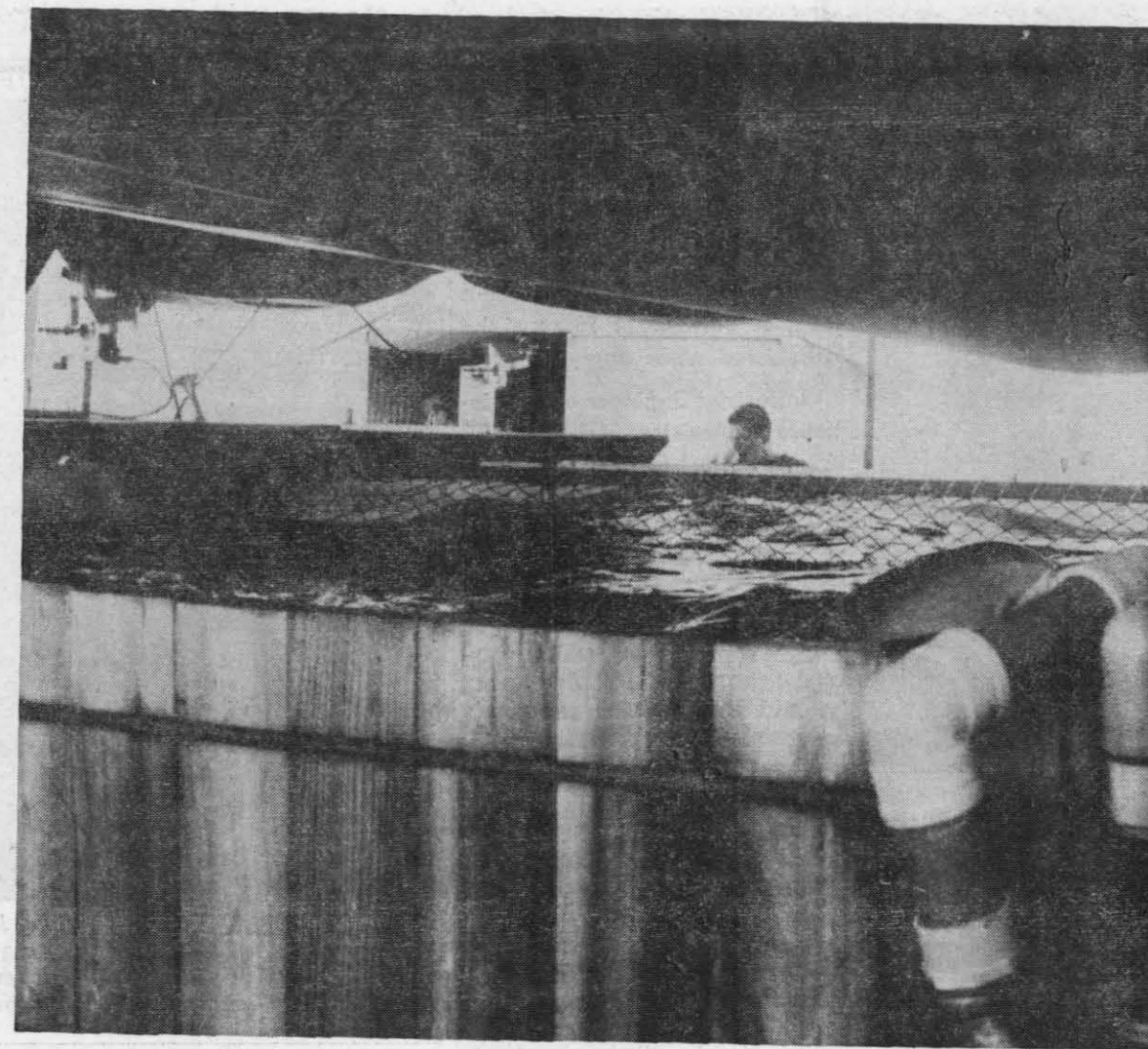
ACOUSTIC "BEACONS," held under water at three stations in pool, command varying actions (above) by "Buzz-Buzz." Bill A. Powell (foreground) and Robert E. Bailey (background) demonstrate application of program.



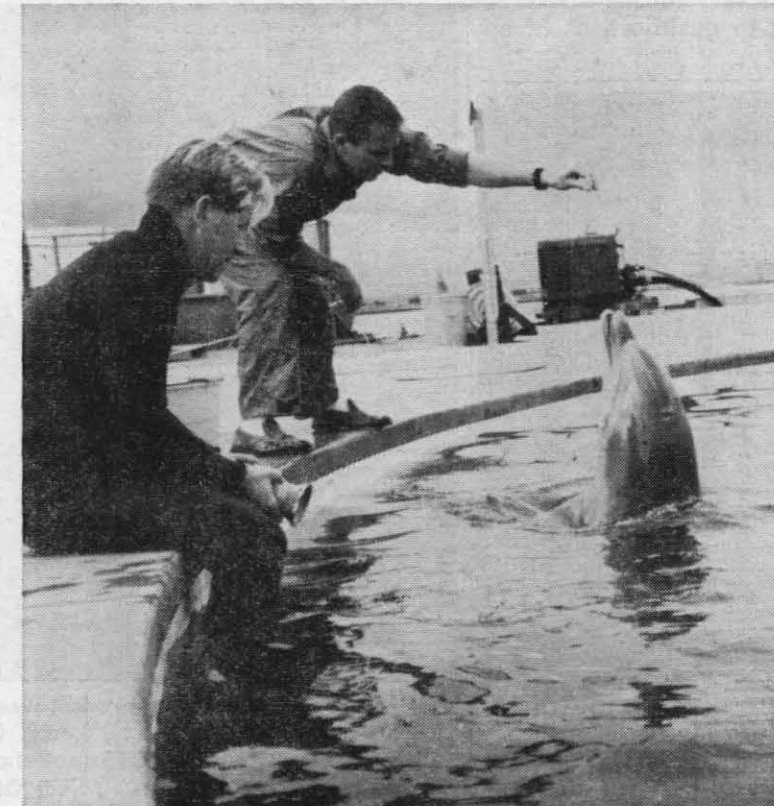
BELLY CHECK of "Buzz-Buzz" by Bailey (right) reveals that skin irritation is healing nicely. Animals are under constant inspection.



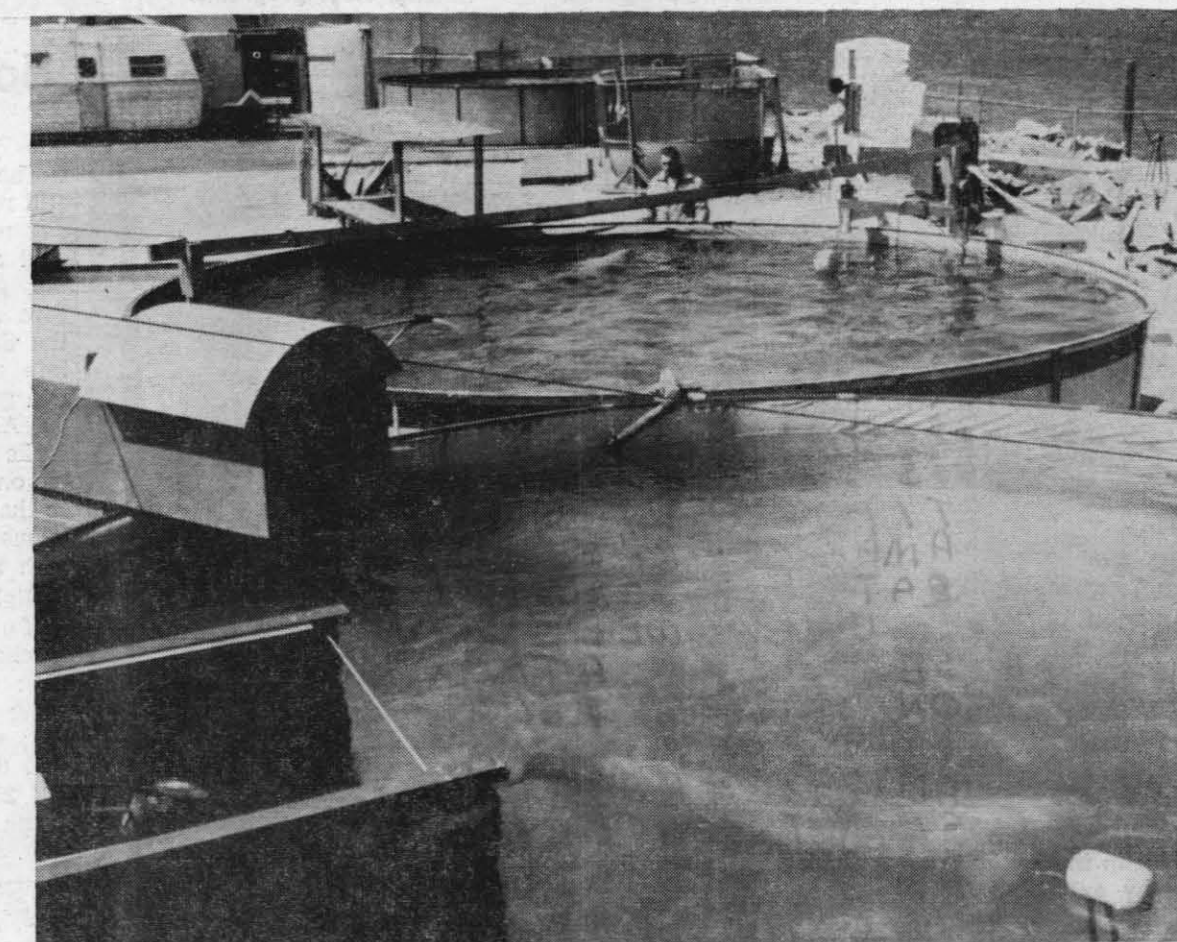
SCOTT JOHNSON (left) checks skin on "Salty" as a routine function in maintaining animals in captivity.



COVERED TANK (above) holds pair of porpoise undergoing studies that involve command by lights. Tank's canvas roof cuts glare from sun, giving animals better vision in critical work.



"BUZZ-BUZZ" gets a fishy reward (left) from Bill Powell while researcher Robert Bailey takes a break in training session that involves acoustic commands of porpoise performance.



MARINE BIOLOGY Facility at Pt. Mugu includes layout of temporary, above-ground tanks in addition to more permanent pools built of concrete. Plans presently call for construction of tanks replacing temporary facilities.

(Continued from Page 4) ones which have greater speed potentials. These tests will further qualify man's search for the ultimate design in hydrodynamic application.

In Separate Tanks, they 'Chat'
From the pure curiosity standpoint, one of the most interesting tests yet conducted involves inter-tank communications with a porpoise in each of the two tanks.

A hydrophone complex linking both tanks and monitored by one of the facility's investigators reveals that porpoises literally "call" one another. Thereafter, they "chat" via the man-made communications hookup as might a pair of housewives on the telephone.

Pull the plug on either end of the line and the porpoise "conversation" stops.

What all this means is yet to be learned. Definitive information gleaned thus far indicates, however, that there does exist in the porpoise a degree of intelligence sufficient to distinguish it from animals thus far observed by science.

The Navy's current porpoise studies go back to the year 1959, which were initiated by Dr. McLean. Dr. Rene Engel, Research Department, was one of the first Station officials to institute formal investigation of porpoises.

Lang Directs
By 1962, enough data had been collected to stimulate a program of further study.

Tom Lang was appointed to direct these studies, the first of which were held during the early part of 1963.

Interest and tangible data have been produced on a continuing basis since that time.

In January this year, the Facility operation and ownership was transferred to the Naval Missile Center, commanded by Captain Carl Holmquist, formerly attached to China Lake as Technical Officer.

F. G. Wood, Jr. serves as Manager of the Facility with the following NOTS personnel engaged in tests sponsored by the Station: Dr. C. Scott Johnson, Ralph H. Penner, Robert E. Bailey and William E. Evans.

Bill A. Powell, formerly associated with Behavioral Sciences Group locally, serves as NOTS Coordinator for all studies under NOTS sponsorship.



SCOTT JOHNSON fits "blinds" on animal for tests involving identification and retrieval of articles through sonar.