



BULLETIN

ISSUED IN THE INTERESTS OF THE PERSONNEL OF LMAL, NACA

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LANGLEY FIELD, VIRGINIA, MARCH 19, 1943

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RED CROSS DRIVE NETS OVER \$2,000

LMAL employees came through with contributions totalling \$2,000.25 in the combined membership and war fund campaign of the American Red Cross, conducted last week throughout the Laboratory, it was announced by Mrs. Lucy Bainbridge, of the stenographic Section, chairman of the drive.

Officials of the Laboratory were gratified at the response of the personnel in making the drive a success. Mrs. Bainbridge offered the thanks of the solicitors for the cooperation received by them.

This amounts to nearly 15 per cent of the \$14,000 campaign quota assigned to the Elizabeth City County Red Cross Chapter, which will receive the funds collected at LMAL. The names of the workers, the sections they canvassed, and the amounts collected are listed as follows:

Miss Katherine C. Thomas, Administrative, \$187.00; Miss Emilie C. Coe, Loads, Computers, \$51.75, and \$38.00; Mrs. Frances Powell, West Machine Shop, Prop Shop and Foundry, \$57.25 and \$33.25; Miss Elizabeth Saunders, Maintenance, \$76.10; Vera Huckel, Physical Research Div., \$48.50; Miss Kathryn Puckett, Pilots and Flight Research Maintenance and Repair, \$38.00; Miss Jeanette Cooper, 19-foot Pressure Tunnel, \$58.50;

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NEXT GREEN COW DANCE IS MAR. 26

The Noble Order of the Green Cow is at it again! Encouraged by the success of its most recent dance on March 5, the Committee is formulating plans for the second dance of the year, to be held Friday evening, March 26, from 7:30 to 11:30 p.m. at the Hampton Armory.

T. Melvin Butler, Chairman of the Committee, said the orchestra has not as yet been selected and will not be announced until the evening of the dance. The Committee offered its regrets at not being able to hold the affair on a Saturday, but there are no dance halls available on those days.

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AIRCRAFT PLANT NEARLY COMPLETE

The Bell Aircraft plant in the vicinity of Atlanta, Georgia, is expected to begin soon the production of long range multi-engined bombers of a closely guarded design for Uncle Sam's Army Air Forces.

The Army only recently approved the release of certain information concerning the plant, which will be one of the world's largest aircraft manufacturing centers. It will require 30,000 employees, two-thirds of them women.

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PART-TIME WORKERS EMPLOYED BY LMAL

In an effort to alleviate the rapidly growing manpower shortage, employees for LMAL are being recruited from among the student bodies of High schools on the Peninsula to aid in the vital aeronautical war work performed by this Laboratory for the Army and Navy.

Through a systematic and carefully planned training program, these boys, whose minimum age is 16 years, are now receiving instruction in various Technical Service Shops. At the present time

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CONGRESS PATS NACA ON BACK

A pat on the back was given the NACA in this Congressional Record excerpt of Feb. 25, pertaining to the first efficiency appropriation bill of the 1943 fiscal year:

"Mr. Miller of Connecticut: 'Mr. Chairman, in the appropriation bill now before us we find an appropriation for three and one-quarter million dollars for the National Advisory Committee for Aeronautics, as well as an appropriation of a little over a million

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EDITORIAL STAFF OF LMAL BULLETIN

Joseph P. Doyle, Jr.-----Editor
 H. Lee Dickinson-----Associate Editor
 Ben Vogel-----Art Editor
 LMAL Employees-----Reporters

'VICTORY THROUGH AIR POWER'

(An Editorial)

This month marks the 28th anniversary of the establishment by Congress of the NACA. Born in March, 1915, as the powers of Europe sought to settle their differences by resort to arms, and nurtured in a post-war world busy with rehabilitation, the Committee today finds itself face to face with another war--global in its aspects.

LMAL employees take just pride in the continued successful activity of the Committee and the contribution it has made to aeronautical research in its nearly three decades of existence. Let us realize our responsibility in this war and pledge anew our energies in an all-out program designed to assure the United Nations of "victory through air power."

Special Service Progressing

The special service which has been inaugurated in the Administrative Office and announced two issues back in the Bulletin, has been progressing and is constituting a worthwhile service for employees. The response of the Laboratory in general to the previous request for suggestions has been disappointing.

However, the office with its usual hardihood and desire to serve, has made progress which is gratefully received in some quarters. With this encouragement, those concerned desire to remove their light from under the bushel and let it shine throughout the Laboratory. Offered for your convenience are the following:

Our first really successful riding club service. If you have rides to offer, or if you need a ride call 313.

A schedule of transportation which includes bus schedules, street car schedules, ferry and train schedules. Telephone for any information you may require.

Forms of various kinds are available for the asking. Also blank checks, deposit slips and bank notes from the three banks rendering special service to Laboratory employees.

Answers will be given to any puzzling questions concerning any reasonable subject connected with the Laboratory, or its rules and regulations.

This is a service for your benefit and can be continued only if the Laboratory is sufficiently interested to warrant its continuance. Your suggestions are still in order.

PIONAIRS: First wind tunnel in America was built by the Wright Brothers. It had a throat 12 inches square and a simple balance for measuring air forces on a model.

GOOD AND TRUE: Early regulations stipulated that the NACA was to be comprised of no more than twelve members. There are fifteen members on the present Committee.

AERL ORGANIZING MUSICAL GROUP

AERL is forming a musical organization under the direction of Emory Maison, Installation of Research Equipment Section, who hopes to discover from among the group's membership a symphony orchestra, dance band, male chorus, and girls' glee club. Fred Bonnie, Jr., of the Stockroom Section, will direct the symphony-----The Nicnaca Social Club is sponsoring a semi-formal dance at Hotel Carter on March 20---A. M. Tessman has been officially appointed Technical Supervisor of research fuel storage facilities-----B. G. Gulick has been designated acting chief of the Construction Division-----Ed Kaltenstein, formerly of AERL Purchase, is studying to be a purchase clerk in Uncle Sam's Army-----Harold Wiknich, art editor of Wing Tips, drew a new, permanent masthead for the AERL weekly---Frances Jackson is collecting reading matter for boys in the Armed Forces----Harrison A. Underwood is chairman of the AERL Red Cross campaign----A group interested in sharing good reading material has formed a library of privately-owned books-----A square Club is being organized---Several AERL employees are registering with the Blood Donor Service of the American Red Cross.

HONEYMOONERS: Leo F. Felhner, of the Stability Tunnel, and his bride, have returned to their home at 3209 Chesapeake Avenue after a northern wedding trip, during which they visited his home in Dolgeville, N. Y., and the Adirondack Mountains.

VIRGINIA GENTLEMAN: Letters in answer to Purchase Office telegrams signed NACA are often received at LMAL addressed to Mr. Naca.

Did you cash a bond to pay your taxes, or save them to help defeat the Axis?

NACA IS NOW 28 YEARS OLD

PIONEERS HAD MANY DIFFICULTIES BEFORE COMMITTEE WAS ESTABLISHED

Establishing the National Advisory Committee for Aeronautics, whose facilities have undergone an amazing expansion in its 28-year history, was no easy task - especially since aviation, like the horseless carriage, was viewed three decades ago as something of a crackpot fad without a future.

In addition to the misgivings with which Americans, after the turn of the century, looked upon aeronautics in general, a war was brewing in Europe, and President Wilson appeared reluctant to sanction the formation of a Committee for fear that it might be interpreted at the time as an unfriendly act.

U.S. Lax at First

Prior to the inauguration of the Committee the United States, with the exception of a few air-bitten pioneers who carried on despite the discouraging public apathy, had been extremely lax in the attention it gave to the possibilities of aviation - both as a means of commercial transportation and as a powerful weapon of war.

When on March 3, 1915, all opposition was dissipated and the Committee was finally approved by Congress as a rider on the Naval Appropriations Bill, European nations seemed far in advance of the New World in the field of aeronautical research and in the construction of new planes.

War Inspired Research

Perhaps the imminence of war "over there" inspired a planned program of research into the potentialities of aeronautics. At any rate, in the air scouting fleet of France in 1915 there were 1,500 military planes. Germany boasted 1,000 planes plus 14 zeppelins. England, however, could send only 100 planes to France with her early expeditionary force.

The famous Wright Brothers who had been air-minded for a number of years previous, taught us to fly one day about 40 years ago on the bleak sand dunes of Kitty Hawk, North Carolina, but when Pershing went into Mexico in 1915 Uncle Sam was able to send only a "doubtful dozen" planes with him.

Walcott Interested

Dr. Charles D. Walcott, who early in 1913 was secretary of the Smithsonian Institution, began to assume an active interest in aeronautical research and the need for it in America. He must have read with chagrin the figures on the aeronautical expenditures of various countries from 1908 to 1913.

Aero Expenditures

During that period, Dr. Walcott learned with some disillusionment, Germany spent \$32,000,000, France \$25,000,000, Russia \$12,000,000 and England \$3,000,000, while the United States expended only \$435,000, less than \$75,000 a year. The comparison set Dr. Walcott pondering.

There had been some private research in America up to 1914, but the only Government research at that time was limited to preliminary work with an experimental wind tunnel at the Washington Navy Yard. Although the tunnel was being used advantageously, the expansive research needs overshadowed the meager facilities that were available.

Dr. Walcott concluded that America needed a bit of persistent prodding. He began to act. His plan was to reopen Samuel P. Langley's old labora-

tory in the Smithsonian. His enthusiasm was absorbed by some other well-known aviation pioneers and, as a result, Dr. Walcott, Capt. W. I. Chambers, Glenn Curtiss, and Orville Wright formed the Advisory Committee of the Langley Aerodynamical Laboratory.

ACLAL Disbanded

It was a high-sounding name, but the Committee struck a low, unresponsive chord in official Washington. Disappointment was destined for Dr. Walcott in his first concerted action, for the Comptroller of the Treasury ruled that the Committee was not established by law, and, therefore, could use neither Government funds nor personnel. So the Advisory Committee of the Langley Aerodynamical Laboratory disbanded after holding three meetings.

Not easily discouraged was Dr. Walcott. He believed sincerely in the future of aeronautical research and the part his nation should play in it. He met his second rebuff when he presented his plan for an NACA to President Wilson. Shortly afterwards, however, the Committee was finally approved with an initial appropriation of \$5,000.

Program Coordinated

Thus, the first Committee of 12 members, appointed by the President on April 2, 1915, began to function. Feeling its way gradually, the Committee slowly but surely began to coordinate its realm and to demand attention not only from its own people but from nations that had enjoyed a head start on America.

Today the Committee directs the research activities of three widespread laboratories; LMAL at Langley Field, established soon after the Committee began to function; the Ames Aeronautical Laboratory at Moffett Field, Calif., named after a faithful former Chairman of the Committee, and the AERL at Cleveland.

CLUB ORGANIZED BY APPRENTICES

An Apprentice Social Club has been established by a group of LMAL Apprentices with the view to sponsoring dances and parties and forming within the main organization various smaller clubs. The next meeting will be held at the Hampton USO Club Wednesday, March 24th.

A board of directors has been elected, including Leigh Lewis, chairman; Jack Kinzler, vice chairman; Joe Dodson, treasurer; Frank Dresback, secretary; Bertram Miller, publicity director; Gene Hicks, activity director; Bob Stewart, councilor, and Karl Lambroff, membership director.

The club is arranging to use the American Legion Hall in Hampton as a clubhouse. Dues will be \$1.50 a month, plus a \$1.00 membership fee. Graduates and prospective Apprentices who would like to join may communicate with Leigh Lewis.

NACA Complimented

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dollars to complete the experimental laboratory at Cleveland, Ohio.

"I am glad to find this item in the bill. I think many times we have overlooked the importance of the work done by the National Advisory Committee for Aeronautics. Our Army and Navy and the units of our aviation industry have cooperated extensively with this committee. The enviable position in which we find ourselves in the aviation world, I believe, is due largely to the work of the Advisory Committee."

BENEFACTOR: Daniel Guggenheim, up to the time of his death in New York on Sept. 28, 1930, had given approximately \$6,000,000 for promotion of aeronautical knowledge.

STOCKROOM NOTES

by Johnny Bergbom

"Hats off" to the Main Office and our old pal Clyde. His generous offer of various services, sight unseen to all, is really a noble gesture. What we want to know is whether to class it as propaganda. We might even class the offer as timed right, seeing as this is the time of year when a lot of hopes are being upheld. Or if his offer resembles such items as "gross earning" slips, he can rest assured we already knew the extent of that bad news. What we would really have appreciated was information on how to have satisfied the "Uncle", stay "flush" and also stay out of jail or the poorhouse.

'Happy Living'

But we have hearts too and are also making an offer. Our formula is for "happy living" and has worked for years. "You tell us your woes—we tell you ours, and when all the hot air has blown away the fellow who thought he had the biggest peeve will probably be the most relieved."

A little early, or late—have it your own way, Santa is sending us some rare items, indeed: Ammunition trays for buckets, cardboard containers in place of tin, synthetic-covered primary wire to make Bill Elder happy again. Be careful about using the cardboard containers, though. We may have some on hand soon but from the data furnished by the manufacturer, I believe he is experimenting also.

Order By Phone

Let's cooperate and save rubber and NACA bus space. Order from stockroom nearest your activity by phone instead of sending someone by bus. When they do not have what you want they have been instructed to locate the nearest supply and have the regular delivery trucks de-

MARCH 29-30 DATES OF HAMPTON PLAY

The cast of the Hampton Little Theatre's next presentation, "Out of the Frying Pan", a comedy in three acts by Francis Swann, has been selected and rehearsals are being held almost nightly in preparation for a two-night stand at the Hampton High School auditorium March 29th and 30th.

Eleven of the twelve characters in the fast-moving drama are portrayed by employees of LMAL. The director is David Goldenbaum, of the LMAL Tank, a veteran of amateur theatricals on the Peninsula.

Cast Announced

The cast, in the order of their appearance, includes John C. Houbolt as George; Evan H. Schuette, Norman; Mrs. Benjamin G. Bennett, Mrs. Garnett; Joseph P. Doyle, Tony; Miss Ann Cock, Muriel; Miss Jack Cock, Kate; Miss Kay Kelsey, Marge; Miss Nancy E. Wahl, Dottie; James Betts, Mr. Coburn; John B. Parkinson, Mr. Kenny; Murray O'Toole, first cop, and Stuart Lane, second cop.

Mrs. Irene Farster is in charge of staging and props for the troupe's first 1943 production.

liver to your place of work. Order supplies in advance whenever practical so we can plan the best service routine in filling your orders.

Please see that caps on compressed gas cylinders are returned on the empties. We are forbidden to accept return of, and the driver cannot carry, capless cylinders.

Use the NACA bus as little as possible around starting and quitting time. Tired workers going home after a days work need most of the space at those times and workers coming in on the late shifts also must be accommodated.

Part-time Workers*(Continued from page 1)*

51 of these boys are assigned to work from 4:00 p.m. to 8:00 p.m. Monday through Friday and from 3:30 p.m. to 11:30 p.m. on Saturday. They have a Civil Service Classification as Under Laboratory Apprentices and are paid at the rate of .55 cents per hour.

These boys are working under the jurisdiction of the Apprentice Administration and are receiving intensive instruction in the fundamentals of machine tool operations from a competent staff of apprentice training personnel, that has been set up exclusively for the training of these high school students. They are working on special projects so designed as to teach the basic machine operations then, as the boys become proficient they will be advanced to more complicated projects.

At the end of the present school term those whose work has warranted it will be given full-time employment at the same Civil Service rate and will receive \$1320 per annum plus overtime. Efforts are now being made through the cooperation of Dr. B. H. Van Oot, State Director of Vocational Education, and Officials of the high schools of the Peninsula, to recruit an even larger number of these boys.

When a large enough group has been obtained, the second shift of certain Technical Service Shops will be turned over exclusively to the training of these boys. In this case the boys will then be split up into two groups. The first group will work Monday, Wednesday and Friday from 3:30 p.m. until 11:30 p.m., and the second group will work Tuesday, Thursday and Saturday the same hours. By doing this these boys will be able to complete their high school term and still be able to greatly aid the war effort.

RED CROSS DRIVE*(Continued from page 1)*

Mrs. Temple Cook, Flight Research Maneuvers, \$71.00; Mrs. Iris Geer, Structures Research, Construction Office; Construction Inspectors, \$60.50; \$17.00, and \$4.00; Miss Kathryn A. Banick, East Machine Shop, Erection Shop, \$62.00, and \$35.00; Mrs. Jessie A. Pere, Instrument Service, \$48.25; Miss Louise Moss, 16-Foot Tunnel, \$67.50; Miss Frances Winder, Full-Scale Tunnel, \$67.50; Mrs. Anne R. Robinson, West Sheetmetal Shop and Model Surfacing & Finishing Shop, \$55.00;

Miss Martha Willis, Apprentice Administration Office, \$9.00; Mrs. Edith M. Ferrall, East Area Model Shop, Dynamic Model Shop, \$39.50, and \$12.50; Miss Jeanne Goddin, Engineering Section, \$66.00; Miss Katherine F. Kelsey, Atmospheric Wind Tunnel, \$100.50; Mrs. Clara Anderson, Instrument Calibration, Blueprint Room, and Photo. Lab., \$50.00; Miss Helen Ellett, Propeller Research Tun., \$37.00;

Miss Ida Young, Editorial Office, Power Plant Installation, Chief Aerodynamics Div. Office and Assistants, \$15.00; \$14.00, and \$22.00; Miss Marjorie Mumford, Chief Technical Service Office, \$19.50; Miss Marjorie Barber, Stock, L. W. Purchase, \$22.50; \$9.00; Miss Dorothy Cole, Instrument Research, \$53.50; Miss Catherine E. Thomason, Airflow Research, \$65.50; Mrs. Katherine A. Livesay, 8'-High-Speed and 24-Inch Tunnels, \$56.30; Mrs. Vivian Smith, Electrical, \$34.00; Mrs. Anna Land, Hydrodynamics Division, \$83.10; Mrs. Elizabeth Keetch, Power Plants Division \$89.50, and Miss Marjorie T. Gildner, Stability Research, \$126.75.

Aircraft Plant*(Continued from page 1)*

The main assembly building is large enough to house the nation's total annual cotton crop, which in 1942 was 12,000,000 bales. Probably the world's largest door closes one end of the main assembly bay.

As an indication of its immensity, the project absorbed enough structural steel, lighting, paving, and drainage materials to build a city.

It was less than a year ago that bulldozers began flinging red clay from the Georgia hills, but as an example of the speed of construction, workmen walled in a ten-ton truck in the huge basement while the driver was out to lunch.

IGNORANCE IS BLISS: Test Pilot Melvin N. Gough set a plane down on a small southern field several years ago. An attendant watched as Mr. Gough signed the register. "NACA," mused the attendant. "Oh, yeah—that cowling factory up in Virginia."

Lamp Removed From I.C.L.**Without a Loan Slip**

R. E. Mixson reports that a lamp was removed from the I.C.L. without a loan slip being filled out. Please notify him if you know of its whereabouts. It is a fluorescent lamp, non-adjustable two-column pedestal, with inventory No. 18500.

HETEROGENEOUS: Personnel of the first NACA included four university professors, an Assistant Treasury Secretary, two representatives each of the War and Navy Departments, and one person each from the Weather Bureau, Bureau of Standards and Smithsonian Institute.

FLUENTLY FRANK: An applicant for employment at LMAL wrote on his questionnaire that he spoke Spanish "unfluently."

GROWING PAINS: LMAL, in 1916, had five employees and one building.

SEE THE WORLD: Ensign Charles Freed has left the Stability Tunnel for service in the U.S. Navy.

MR. & MRS. SHARP RECOVERING FROM ACCIDENT INJURIES

Edward R. Sharp, Manager of AERL at Cleveland and former LMAL official, and Mrs. Sharp, are recovering from injuries suffered in an automobile accident Friday evening, March 5, while they were returning home from a visit to friends.

Mr. Sharp's car skidded on an icy Cleveland road and struck an iron fence, according to Charles A. Hulcher, Apprentice Administrator, who returned to LMAL last week after a trip to the Cleveland Laboratory.

Were Moving Slowly

Although the car was only traveling at a speed of about 20 miles an hour, since a right angle turn had to be made approximately 100 yards ahead, the impact against the iron fence brought the vehicle to an abrupt stop. Mrs. Sharp was thrown against the windshield and Mr. Sharp against the steering wheel.

Mrs. Sharp suffered a broken bone in her left arm and several lacerations on her face which required 14 stitches. She also received bruises. Mrs. Sharp last week was convalescing at a Cleveland hospital, but was expected to return to her home within several days.

Mr. Sharp's Ribs Broken

Mr. Sharp was confined to his bed at home where he was recovering last week from a severe cold and cough, which complicated the rapid healing of his ribs, a number of which were broken in the accident. Although the injuries suffered by Mr. Sharp were reported to be painful, they were not regarded as of a serious nature. He was able to conduct much of his work, despite his confinement to bed.

The accident occurred during an unusual cold spell. The temperature in Cleveland on March 4, the day before the mishap, was 3 above zero.

EMPLOYEES PLAN VICTORY GARDENS

A number of LMAL employees who, unlike Old MacDonald, never had a farm, will cultivate Victory Gardens this year. In view of the rationing program, the State Health Department suggests that this will be both a healthful and a money-saving activity.

The Virginia Agricultural Extension Division, of Blacksburg, offers a few elementary lessons to would-be Victory Gardeners:

Locate the small gardens on fertile, well-drained soil convenient to the house. Prepare the soil by plowing or spading to a ten-inch depth, breaking all clods and eliminating rocks.

Use Fertilizer

Accomplish fertilization with a heavy application of stable manure, if possible, but if garden fertilizer is used, from 100 to 125 pounds per one-quarter acre should be mixed with the soil several days before planting.

Select a good assortment of seed. Make several plantings of corn, beans, cabbage, peas, beets, and the salad crops in order to supply fresh vegetables over a longer period. Cultivate often and shallow enough to

NEXT GREEN COW DANCE IS MAR. 26

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Membership tickets may still be obtained from any of the following:

Administrative Division, Margaret Young; Technical service, Paul Taylor; Maintenance Section, Elizabeth Saunders; Purchase Office, Florence Small; A.W.T., Kay Kelsey; P.R.T., Walt Bartlett; 8' H.S.T., Axel Mattson; Stability Section, Peg Gildner; 19' P.T. Building, John Garvin.

Tank, Anna Land; Hangar, Kitty Puckett; New Shop Building, Bob Johnson; 16' Tunnel, Catherine Richardson; Stability Tunnel, Charlie Donlan; Warehouse Building, Martha Willis; Prop. Shop, Mrs. Woodward; Structures Research, Evan Schuette; F.S.T., Frances L. Winder and West Area Machine Shop Bldg., Leigh Lewis.

keep weeds out.

H. S. Lippincott, County Agent, whose office is in the Citizens' Marine Jefferson bank building in Newport News, may be contacted through telephone No. 71793 if further information is desired.

Further information is available by writing to "Victory Gardens, Washington, D. C.," and requesting booklets published by the Government.

LET'S HAVE SOME COPY!!

The Bulletin is interested in the LMAL family. It wants to know about the parties you enjoy together, the boys who are going off to serve Uncle Sam on a new front, weddings, births, sports activities, and other human interest items. Do you have any interesting mail from boys in the Armed Services who formerly served at LMAL? Are there persons in your section with unusual hobbies? If so, give us a tip and we'll see that the information finds its way into the columns of the Bulletin.

Everyone in the Laboratory is a member of the Bulletin staff. We don't have any word rates--all we can offer for your contributions are "thanks", a smile, and a free subscription to the Bulletin. If you have any ideas please communicate with Joe Doyle or Lee Dickinson, in the Administration building, phone 313. Our coming edition will be distributed about April 2. The deadline for contributions will be March 29th.