

cally accurate piece of equipment; and without his aid our war-time services would have been severely handicapped."

Mr. Steinback was one of the most enthusiastic supporters of the idea that San Francisco should have a planetarium. He had a deep interest in astronomy, far beyond that of the average amateur. He looked forward to the time of his retirement, so that he could devote his full energies to his chosen subject, the observation of variable stars. In preparation for this he had first constructed a six-inch Newtonian telescope; mostly for experience in working optical surfaces; he followed this with a 12-inch Cassegrainian telescope. The accuracy built into this last instrument is well demonstrated by the fact that Mr. Steinback spent eight months figuring the surface of the small secondary mirror. He had installed the completed instrument in a properly designed observatory dome and had used it whenever conditions permitted.

In 1943 Mr. Steinback was honored by election to Life Membership in the California Academy of Sciences, in recognition of the value of his services to the institution.

Because of Mr. Steinback's interest in all of the Academy's activities, and especially his devotion to the planetarium project now moving toward completion, Mrs. Steinback and their son, Edward, have decided to present the telescopes and the equipment and books belonging with them to the Academy. It is hoped that the Cassegrainian instrument can be mounted and used on occasion by the visiting public for observation of the stars. Thus it will become a fitting memorial to its builder, to be enjoyed as a beautiful example of workmanship from the hands of a man who made it solely because of his profound admiration for the beauties of the night sky, and his desire to fathom its mysteries.

APPLICATIONS FOR MEMBERSHIP

NOTICE is hereby given to all Corporate Members that the Council has approved the applications of Mr. Peter Abenheim, Mr. James F. Burnette, Mr. R. O. Caukin, Mr. Farnsworth Currier, Miss Irma Doty, Mr. Fred Fehleisen, Mr. George E. Lemke, Miss Sara Malone, Mr. Paul D. Marr, Mr. Jack Rigg, Mr. R. Mark Ryan, Mrs. Marguerite E. Schwartzman, Mr. Robert Terry, Mrs. Carl F. Wagner, and Dr. H. Henry Weisengreen for REGULAR MEMBERSHIP, and of Warren Cane, Robert L. Dryfoos, Eugene Kadish, John Landgrebe, William Meyers, Lester O'Shea, Stephen Reuben, and Roland Sellman for STUDENT MEMBERSHIP in the California Academy of Sciences. If no objection to the election of these applicants be received at the office of the Academy within two weeks after September 15, they will be considered elected.

THE SUN ALSO . . .

—WILL BE THE SUBJECT of public illumination this month in San Francisco. The Astronomical Society of the Pacific announces a free, illustrated, non-technical public lecture on the sun, under Society auspices, by Dr. Giorgio Abetti, Director of the astrophysical observatory of the University of Florence at Arcetri, Italy. It will be at the P.G.&E. Auditorium, 245 Market Street, September 15, at 8:00 P. M.

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Photograph by Lick Observatory, University of California

"NEW LIGHT ON THE MOON"

(See Page 2)

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September Announcement

THE REGULAR SEPTEMBER MEETING of the California Academy of Sciences will be held in North American Hall, West Wing of the Academy buildings in Golden Gate Park, on Tuesday evening, September 19, 1950, at 8:00 o'clock (*please note return to customary meeting time*). Mr. Leon Edward Salanave, Astronomy Instructor in charge of the Sacramento Junior College Observatory, will give an illustrated talk entitled

"NEW LIGHT ON THE MOON"

Subtling his talk "Recent Developments in the Meteoric Theory of Lunar Craters," Mr. Salanave will show the newest photographs of our satellite, specially selected to illustrate his discussion of current ideas concerning the origin of the moon's most striking features, those vast circular depressions.

Besides the craters, the moon—a dead world—has immense mountain ranges forming great arcs, and the dark patches we call "seas." Actually, we know the moon has neither air nor water; the "seas" are rock—fairly smooth areas in comparison with the other features. Through a powerful telescope the lunar surface, apart from the "seas," appears extremely rugged, without the slightest evidence of erosion—the softening, rounding, flattening by which wind and water shape the earthen landscape.

For decades past astronomers have debated, sometimes violently, the origin of lunar craters, most of them holding that volcanic action was their chief cause. A comparative few have thought them the result of meteoric impact. But recently scientists have studied the effect of bomb blasts in earth; they have reexamined the moon's craters through more powerful modern telescopes, comparing them more closely with earth craters we know were dug by meteors. Today, meteoric impact is highly favored over vulcanism as the cause of lunar craters. One of the chief contributors to the new studies Mr. Salanave will describe is Dr. R. L. Baldwin of the University of Michigan.

The moon may be dead, but interest in astronomy is very much alive, our speaker can testify. Going to Sacramento Junior College three years ago after completing graduate studies at Berkeley, Mr. Salanave found College equipment in disuse and the Sacramento Valley Astronomical Society kept going by ten devotees. He got the College's astronomy department out of the cobwebs and put into commission a 12-inch reflecting telescope—largest now in public use in California north of the Los Angeles area. Membership in the Astronomical Society has jumped to 150 enthusiasts.

Since work was begun on the Academy's planetarium projector, Mr. Salanave has been astronomical consultant, responsible for the mathematical calculations necessary to plan and build an accurate instrument.

The public is cordially invited to enjoy the "New Light on the Moon."

"SCIENCE IN ACTION"

—IS THE TITLE OF A LIVE TELEVISION SHOW produced by the California Academy of Sciences and sponsored by the American Trust Company, which will take to the air September 21. On that date the first of a series of weekly Thursday evening programs will be telecast by KGO-TV, channel 7, from 7:00 to 7:30.

Announcing the new show, Dr. Robert C. Miller, Director of the Academy, states: "This television series, created and presented by professional scientists, will bring the absorbing drama of nature and science to the television audience, with subjects ranging from the grassroots jungle in your own back yard to the newest developments in atomic research.

The first telecast, titled "Nature's Warfare Experts," will show the methods of offense and defense used by animals in their struggle for existence. Living tanks, harpooners, artillery, and chemical warfare experts will parade before the cameras.

Tom Groody, member of the Academy's scientific staff and host-narrator of the television series, pioneered the telecasting of science in San Francisco. Last year he appeared weekly as a guest on Station KPIX, introducing seals, sharks, sea horses, porcupines, an octopus, and other animals to an eager audience. The large volume of fan mail led Academy officials to encourage the development of a full half-hour science show.

Academy members and friends, tell everyone you know who has a TV set!

J. E. STEINBACK, STUDENT OF THE STARS

WHEN A MAN engages in a sport, a craft, an art, or studies a science for no other reward than the pleasure it gives, or the intense satisfaction in doing a thing well, we call him an amateur. When an amateur performs his craft or pursues his science with supreme competence, the field of his chosen activity is immeasurably enriched. No science, perhaps, owes more to its amateur workers than astronomy. Some of its major discoveries can be traced to the devoted efforts of house-top and back-yard observers, many of whom built their own telescopes.

When war struck in 1941 a small group of amateur telescope makers joined Dr. G. Dallas Hanna in the Academy instrument shop for the military optical work which grew into a full-time, integrated endeavor under government contract and brought the Academy a Navy Certificate of Achievement. One of that group was Jalmer Edward Steinback of San Francisco.

Upon the occasion of Mr. Steinback's untimely death, June 14, 1950, Dr. Hanna recalled that "in his hands a chunk of glass would become a fantasti-