LOYE HOLMES MILLER
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Padre Loye (1874–1970) had the longest record in ornithology for anyone in western North America. He reports at the age of 4 having chased a yellow and black oriole, and when more than 95 years old was still commenting on the Mockingbirds, Scrub Jays, and other avian members of his environment. For full nine decades he was a devoted student of western birds, a record that few if any other persons have approached.

His interest was addressed to birds in their natural environments. He was a student of the field more than the laboratory, a notable exponent of Louis Agassiz's dictum—"study nature, not books." Loye Miller had proper respect for the subject matter in books and for specimens in both the laboratory and the museum. Lifelong, indeed, he was a collector of skins and skeletons. His major interest, however, was the living bird and its voice and song—of which he was a talented imitator. He was a pioneer ranger naturalist in national parks as a lecturer and field guide for members of the interested general public. He taught natural history at Los Angeles Normal School (1904–19) and, in the University of California, he was successively student, teacher, researcher, administrator, and counselor to, and beyond his formal retirement in 1943. For many years he was one of the most talented investigators of fossil birds of which he described 42 species and 12 genera.

In 1950 the University of California published his "Lifelong Boyhood Recollections of a Naturalist Afield" (226 p.). This comprised biographical details of his earlier years, summaries of four major field trips, and six previously published selected writings.

Hildegarde Howard, his first Ph.D. student, an avian paleobiologist, wrote a sensitive biography "In Memoriam: Loye Holmes Miller" for The Auk (88: 276–285, April 1971) and prepared the bibliography printed in this issue. Other pertinent biographical material can be found in Miller's field notes discussed beyond. No account, short of a full-scaled and detailed biographical volume, can do justice to his attainments and to his influence on contemporaries.

My friendship with Loye Miller extended for 60 years. We met at Berkeley in 1910 when he was "teaching assistant" (at $200 per year) in comparative anatomy for the portion on osteology. He was directed by paleontologist John C. Merriam (under whom L.H.M. wrote his thesis on fossil birds for the Ph.D., 1912). He was an occasional visitor at the Museum of Vertebrate Zoology in Berkeley (where I was on the staff, 1914–23). We camped together on Tahquitz Creek (Palm Springs) in 1923 and at Crater Lake in 1926. He was President and I was Secretary for the Cooper Ornithological Club (C.O.C.) Board of Directors (about 1925–34) and we managed the annual Club meetings. We met now and then at other C.O.C. and scientific gatherings up and down California, and were guests in each other's homes. His office and department was a port-of-call whenever I visited his campus, even after he retired in 1943.

In 1961 I learned of the impending dissolution of agriculture at U.C.L.A. and that Dr. and Mrs. Frederick T. (Alice) Addicott, with whom Padre was then living, were transferring to Davis. I invited him to share my office and, from early 1962 on, we sat vis-a-vis and ripened our long friendship. Save for a few transient illnesses (turtle in my throat, he said), he was in the office five mornings a week, and his owl-call greeting become familiar throughout our department. "Counselor in Biology" and "come in" written on his appointment card outside our door, promptly brought both graduate students and younger faculty to discuss their work and receive helpful advice. He shared the morning coffee break with the department secretarial staff who promptly adopted him. Each year, on 13 October, he was honored by them and the department members at an office party with a decorated birthday cake.

Both Padre's grandfather and father had used guns to supplement the family food supply, as also did Loye in his early years at Riverside. At about the age of 10, he and his brother shot meadowlarks, doves, and robins. "The robins came in the fall and feasted on the

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waste grapes of our vineyards 'till they were rolling in fat. They made good pies and many were provided. We weren't allowed to shoot on Sundays, but my slingshot made no noise. I recall one Sunday when a full dozen robins fell to my trusty sling." Shades of the Migratory Bird Treaty Act and Audubonites—but 1884 was not 1915, nor 1970.

Loye became a collector of scientific skins while in high school. "An old Colt's navy revolver was bored out smooth, carried to school in a clarinet case, and used on the way as a bird-call. The path to school was 4 miles long." His first publication was "A Taxidermist's Gun" (Ornithologist and Oölogist, 18 (7):99, 1893). Two other articles dealt with ornithological weaponry: "A convenient collecting gun" (Condor, 17:226–228, Nov. 1915) and "The auxiliary barrel" (Wilson Bull., 67: 297–301, Dec. 1955). The first described a modified .38 caliber pistol, the second an accessory for the shotgun.

He was a lifelong collector—first of eggs, then skins, and later, of skeletons. In addition he "mined" a huge quantity of fossil bones from the asphalt at Rancho La Brea. In total, he accumulated 4171 bird skins, 2166 osteological specimens, 372 mammal skins, and many paleontological specimens, plus bones from numerous archaeological sites (all deposited in collections at U.C.L.A.). The last were a Sun Bittern in 1969 and a Kaibab squirrel in 1970, just before he passed away. Over the years, his objectives grew and tempered the pattern of activities. Recognizing the need for recent skeletons as comparative material to study fossil and subfossil (kitchen midden) material, Miller became a beachcomber, but was selective. Roughing out a bird skeleton and then cleaning it takes hours of labor and, for the delicate framework of a small passerine bird, skill and tedious care are requisite. Over the years, L.H.M. prepared upwards of 2100 of them, an enormous task of devotion. These were his "dictionary," the reference material that made it possible to interpret the fossil and near-fossil skeletal materials sent to him for appraisal. Always he saw, not the neatly preserved skin or carefully cleaned skeleton, but the bird in life by reason of his continuing close observations of living species. The collected specimens merely fortified his comprehension of the species as they had lived. L.H.M. was no dry-as-dust student of fossil birds—he envisioned them in their daily role in the prior life of Pleistocene-Pliocene-Miocene. He was always ready for a field trip on birds—recent or past.

Mechanically, Loye Miller was unusual for a biologist. He was an accomplished technician and published three articles on collecting guns. That on the auxiliary barrel displayed competence on the use of the metal-working lathe. At home in Davis, he had a Logan Lathe, one of the better types, on which earlier he had produced "aux" barrels for several graduate students. Such self-acquired skill in the minutiae of 0.001 or 0.01 inch dimensions in turning stainless steel is uncommon. His craft extended to other spheres of interest. At the office (in his early 90s) he displayed, in turn, several canes with hand-carved handles, wood or ivory (actually he carved 33 cane handles). On his desk was an array of carved animal subjects especially bears and owls. Besides talents for imitating the voices of owls —so realistic that Great Horned Owls resented his intrusion into their territories—he carved intimate bird replicas in citrus and other woods. Some he carried as "pocket pieces" to handle and polish until they met his standards for finish.

His outstanding Ivory-billed Woodpeckers were realistically carved full-scale, painted, and placed upright on a wooden slab. The head and neck of maple were hinged, balanced, and attached to a chain—if jerked rapidly the bill imitated the amorous tapping of the real bird. Our office door had one with a specimen tag reading "stomach contents wood chips." Various relatives and friends were given replicas of these carvings.

Beginning with the John Day region paleontological trip, Miller wrote notes on field trips and travel from 1900 to 1946. The original notebooks were donated to the Bancroft Library, U.C. Berkeley, after he had copied out most of or all the contents "in a big round hand." When he joined the Department of Zoology at Davis, Chairman Herman T. Spieth provided office help to type and replicate the transcripts. Padre sent copies to a few libraries and museums and to former associates, friends, and relatives (maybe 50 to 75). Many items in the notes that he deemed to be new, or of general interest, had been published (see Bibliography, p. 268, this issue) but much detail remains. The notes provide contemporary descriptions of many localities and of birds or other animals observed. Also they outline his broad coverage in the American West and into Latin America.

On the two earliest collecting trips to Arizona in 1894 (Feb.–Sept.), and to the Cape Region of Baja California in 1896 (May–Sept.), he kept no field notes, but competent

TABLE 1.

Date	Locality visited	Pages
1898	John Day region, Oregon, U. C. Paleontological Expedition, 18 May–9 July	31
1900	First impressions in Honolulu, Jan.: trips to Hawaii and Kauai	50
1904	Cruise on "U.S.S. Albatross," San Diego to Pt. Conception 1 Mar.–16 Apr.	13
1907	Riverside County Gavilan Mtn.	2½S
1908–38	Desert trips (1908: seeking to destroy invading English Sparrows at Barstow, etc.)	15½S
1908–38	Random notes on coastwise (avi) fauna, So. Calif.	18
1910–11–39	In search of California Condors	7S
1914	Journal of first eastern trip [to Atlantic Coast] 16 May—ca 1 Aug.	119
1915–23	Palm Springs Mar. or April 6 trips, ca 2 days each	9S
1917	Yosemite Valley 6 weeks summer school for Long Beach teachers (no field notes found)	
1919	Fallen Leaf Lake—Tahoe area 12 July–20 Aug. (plus 15 days en route to and from Los Angeles)	29
	Also same material: "Fording the Sierras"written for "Lifelong Boyhood" but deleted by editor. Part published as "Summer in the Sierra-1919" Sierra Club Bull., Dec. 1956, pp. 32–45.	
1920	Yosemite Valley, 16 June–16 July	3S
1921	Eastern Journal 10 Jan.–3 Feb. Lecture tour by L.H.M. and Harold C. Byrant promoting National Parks	38
1921	Yosemite Valley 13 June–9 Aug.	5½
1921–23	Buena Vista Lakes 5 trips	6S
1922	Santa Cruz Island and other trips 18–21 Aug.	7+S
1922–37	Mt. Pinos 5 trips, end of May; one 25–26 July	6S
1923	Mammoth and Mono lakes 1 July–4 Aug.	8S
1925	Expedition to El Salvador mid June–15 Sept. 7 weeks in field: L. H. & Alden Miller, R. A. Stirton and A. J. van Rossem	38S
1926	Crater Lake National Park 1 July–16 Aug. as ranger-naturalist (also 1927: 28 June–21 Aug. No field notes)	14S
1928, '29, '30	High Sierra: Kings River, Evolution Basin, Yosemite and Devil's Post Pine. August. each 10 to 18 days	15+
1928–46	Arizona journals	73S
1935–41	Maritime birds	45S
1936	Cruise to Panama 6 Feb.–15 Apr. ashore during Mar. with Frank Richardson	63
1937	Santa Ana Mts.	8S
1938	San Nicolas Island 7–17 July	9S
1939	Gulf of California Cruise 1 Feb.–8 Mar.	40+
1939	Lake Hume, Fresno Co. late Aug.	2S
1941	St. Louis and Centralia 16 June–2 July [visit to son Holmes]	10
1945–47	Joshua Tree National Monument	18S
1946	Mexican trip 30 Jan.–2 Mar.	10S
1946	Urbana, Ill. Amer. Ornithologists Union 29 Aug.–10 Sept.	15
1968	U.C.L.A. Reminiscences (items and anecdotes)	12

Numbers at right are of total pages (= sheets). Those single-spaced are marked "S." These total 286 pages and 438 more are double-spaced—the equivalent of 1000+ pages of double-spaced typescript.

recollections of many details were written years later for "Lifelong Boyhood" (p. 55–103). On those expeditions he began use of the Spanish language which he developed in later years to a good working proficiency.

The above list of the transcriptions is reasonably complete (table 1).

Of his desert camping associates, Padre wrote: "The group of young staff members ultimately formed a tenuous organization called the *Sand Rats.* The students reacted by organizing the *Field Mice.* Both these organizations lasted for many years resulting in the accumulation of a few smoky kettles and many bright memories." His infective enthusiasm—portrayed in "Lifelong Boyhood"—engendered a host of followers who, in turn, transmitted their appreciation of nature to both descendants and friends—alumni of his informal but effective outdoor schooling. His recollections of the U.C.L.A. years close by saying, "It would take a *big* book or a shelf of books to tell all the good things, the things we learned, the happy memories we stored away in our recollection lockers."

Again he wrote:

"My class in Vertebrate Zoology was always happy to go on week-end camping trips to desert, mountain or seashore. . . . The mere announcement that I was "available" was sufficient. Colleagues from Botany, Physics, Chemistry, even English, wanted to go. Some parents also joined in. On one desert trip there were ten separate cook fires going in Box Canyon on the old road from Indio to Blythe. . . . at sunset, I began sounding the call of the Great Horned Owl. In a very few minutes a bird responded. Here he came

to perch on the canyon wall some 30 ft above us, sharply outlined against the sunset sky, his 'horns' (tufts of feathers) standing erect. Sixty or seventy people deserted their cookout fires to come and see the big owl and point and exclaim and chatter. But the owl 'stood his ground' there, only a few feet above us, hooting back in answer. Finally we disappeared to get our suppers and he left to get breakfast without ever learning who was the rival that had talked back to him."

Padre could draw and "charm" both the birds and the bird students.

The origins of mankind's efforts at interpretation of nature are distant. Maybe a Greek in the ancient groves of academe or a philosopher of the Middle Ages tried to introduce his students or friends to the local avifauna. In the West, Padre Loye was a pioneer in this activity. While at the University in Berkeley (1898–99) he occasionally conducted local field trips; the campus and adjacent Strawberry Canyon have always been a rewarding place for bird enthusiasts. (I led bird classes there at intervals from 1914 to 1923, and Harold C. Bryant had an early U.C. Extension class "Six trips afield" there in the same period.) Loye Miller conducted nature study classes at Forest Home in the San Bernardino Mountains in 1912, 1913, and 1914. In Yosemite Valley during 1917 he was the naturalist in a 6-week summer school held by Long Beach teachers.

Meanwhile, Grinnell and I, aided by others, had made a natural history survey of the Yosemite region in 1914–16. The perspective we gained led to the article, "Animal life as an asset of national parks" (Science, 44:375–380, 15 Sept. 1916) in which we emphasized the need for staff naturalists to interpret the park natural resources for the public.

In the summer of 1919, Miller camped with his family for a vacation at Fallen Leaf Lake near the lodge, then operated by his old-time schoolmate and fellow collector, W. W. (Billy) Price. He observed and collected local birds and mammals, was importuned to lead interested vacationists on nature walks, and gave occasional evening lectures on local natural history at the lodge. His only remuneration for field trips was a small fee (50 cents) which fellow campers insisted that he accept.

That summer, Harold C. Bryant of the California Division of Fish and Game was lecturing and guiding nature walks at five other places in the Tahoe area.

Stephen T. Mather, the dollar-a-year first Director of the National Park Service, overheard one of Miller's evening lectures, complete with owl calls. Promptly he proposed that L.H.M. transfer at once to Yosemite and perform the same function. The immediate move was declined, but Miller and Bryant agreed to start interpretative work the next summer, 1920, in Yosemite Valley. They gave lectures or talks, led groups on nature walks, and held office hours to answer questions of adults or children; this was repeated in 1921. Later (1926, 1927), by request, Miller and his son, Alden, started interpretative work at Crater Lake National Park.

Meanwhile Bryant continued his summer activities in Yosemite, and in 1923 opened a 6-week Yosemite Field School of Natural History, mainly to train college students for summer service as temporary ranger-naturalists (dubbed the "90-day wonders"). The teaching staff included both park personnel and science faculty from nearby colleges and universities. Bryant was director 1923–30, then joined the Park Service to supervise its educational-interpretative activities on a country-wide basis. Eventually the Park Service took over the school and later moved it to the Grand Canyon area, where it trained its corps of full time naturalists. That school has been named the Horace M. Albright Training Center in honor of the second director of the Park Service, a lifelong conservationist friend and admirer of Padre.

Thus Loye Miller, together with Harold Bryant, gave major impetus to the nature-guide concept and movement that was to spread across the United States and later to many state and local parks.

In this entire development there was one countercurrent that greatly troubled Padre Miller. C. M. Goethe, a realty developer of Sacramento, California, was much interested in forwarding popular interest in the out-of-doors. He claimed a significant role in the affairs of 1919 at Tahoe, laid claim to having provided financial support for Miller and Bryant in Yosemite, and finally had bronze plaques put up at Fallen Leaf and in Yosemite setting forth his presumed role. No other topic so stirred Padre's indignation as did these claims. Repeatedly, in letters and typewritten statements, he endeavored to set the record straight. He paid his own expenses at Fallen Leaf Lake. In both years Bryant's work was part of his educational duties with the Division of Fish and Game, which paid his salary. There is no evidence that Goethe funded salaries in Yosemite. Miller surmised that Mather anonymously financed the 1920–21 work. He was well-to-do and was known to have supported other meritorious causes.

Padre was also a pioneer in several phases of higher education in California. In 1904 he

became a teacher of biology in the Los Angeles Normal School that was "downtown" at Fifth Street and Grand Avenue. Ten years later the school moved to a new and remote 25-acre site on North Vermont Avenue. He wrote that there were "dust and weeds through the autumn months, and mud and duck-boards during the winter." In 1919, that school became the University of California Southern Branch. Some of his colleagues chafed at being a "branch" (of Berkeley) but he told them "I didn't mind being [in] a branch of my old Alma Mater. She formed a mighty good rootstock . . . you know! It's mostly the branches that blossom and bear fruit." A few years later came the move of U.C.L.A. to Westwood and the dust-weeds-mud cycle was repeated. Jackrabbits, quail, redwings, and meadowlarks were part of the scene.

"Along the stubble-covered ridge (now the north-south axis) the Horned Larks on the wing high above us, teetered and tilted as though hung from the sky-dome by invisible threads, to sing and sing and sing till their ecstasy burned away the threads and let them drift back to earth. If our California Horned Lark had the famous publicity agents—Shakespeare, Keats and Co.—that the English Skylark employed, he would have top billing over his British cousin, for his song is much more varied." "But the Horned Larks had to go. They are a shy fold. Stubble field gave way to dust bowl, dust bowl to the present beautiful north-south axis so the Horned Larks, like Davy Crockett and old Jim Bridger, couldn't put up with too many folks and slipped quietly into history."

His command of language, spoken or written, excelled that of most contemporaries, scientific and literary. An intimate knowledge of the Bible and of the best in English and American literature together with a large vocabulary and a broad background in both zoology and botany were his intellectual resources. With skill in composition and a droll sense of humor, most of his papers became outstanding. Other people wrote on the same or related topics, but his manner of treatment was more expressive. He ranged over a wide spectrum of interests—from straightforward reporting on recent or fossil species, but often with pertinent correlations or interpretations, to jovial allusions or philosophical speculations about observed events. Most papers of his later years had not one, but several, "punch lines."

Representative of the way in which simple paleontological findings were vivified, is the picture of Miocene life at Lompoc as set forth in his 1922 LeConte Memorial lecture in Yosemite (Univ. Calif. Chronicle, July 1923; Lifelong Boyhood, 1950, p. 180–181).

"In the sharply broken hills about Lompoc, California there lies a . . . deposit of snow-white chalky material. . . . These laminated snowbanks . . . are made up of the microscopic shells of marine diatoms . . . in the deposit occur countless . . . carbonized skeletons etched against the white background—the remains of small herrings that swam those seas. Seeking the herring, came fish-eating birds not greatly different from the shearwaters and gannets of today. Some . . . left their carcasses, too, to etch sharp hieroglyphs in black against the dazzling white background of diatoms.

"Only one picture seems proper . . . : a quiet landlocked bay of no very great depth into which schools of herring came to spawn. Pursuing them from the air and dipping into the shallower surface waters came the fisher birds . . . the snapshot . . . [is of] quiet sea and skimming birds, but no sail to give the human touch."

In early years at U.C.L.A., the chairman had to approve and sign the study list of each student majoring in his department. Miller declined to do so for one student. A companion of the latter reported to Padre that "Jim told me you got hard-boiled about his study list." L.H.M. replied, "Tell Jim that as a biology student he should know that only a good egg can be hard boiled."

In February 1969, the Association of Interpretative Naturalists elected Padre as an honorary member. Unable to attend the organization's meeting, he replied gratefully and genially by way of a tape recording, saying in part: "You I would salute with a toast in my favorite beverage—a brimming cup of cool water from a high Sierran stream—the brew of Heaven, elixir of the gods, born of a cloud, sired by the sun, near kin to the dewdrop and the rainbow! Hail! outdoors men." On his first visit to Yosemite in 1917 there were open vistas. Returning a quarter of a century later, the falls and other earlier views were almost hidden. "The open spaces of my first visit had grown up to weeds . . . *Pinus ponderosa*—those charming little chaps now grown tall and lanky. I couldn't see over . . . nor between them. We need to do some very wise and long-range gardening if Yosemite's more intimate charms are to be preserved. You, my younger colleagues, are charged with that duty. . . ." Thus the senior naturalist called for a needed corrective—management of a national scenic wonder so that later visitors also might enjoy some of the most notable views. In part this has been done by the process, euphemistically termed, "vista clearing." Translated, it means cutting lanes through the weed trees so that certain peaks or falls can be seen from favorable vantage points.

Loye Miller had an "uncommon ear for music" that obviously contributed to his talent for

imitating bird voices. Scattered in his manuscripts are musical notations of the calls and songs of some species. He had a keen sense of pitch, and thus was able to place the voices of birds properly on the musical scale of human beings. Some of his imitations of bird voices have been placed on records. Padre also took much interest in folk music. With guitar or violin, he accompanied native singers in Spanish environs and also was wont to entertain with songs remembered from the "Old South." At Davis, when beyond the age of 90, his voice reared more than once in departmental gatherings as the smooth song of a person far younger.

Finally, Padre, the man. He was large-framed, erect, and vigorous—witness the extent of his field work—and he stayed so to the end of his long life. One eye was lost by glaucoma and the other seriously involved, yet he read and wrote much, latterly with the aid of a magnifying lens. Essentially devout, he used no profanity or tobacco and rarely touched alcohol. He was quiet spoken in private conversation but a vigorous and effective speaker. Faculty, staff, and students respected and admired him. He survived a succession of campus chief officers and one heard no adverse comments from his associates. He was skillful in avoiding complicating entanglements in the University even with chairmen or others bent on self aggrandizement. Padre would evaluate some of his associates, but rarely used disparaging terms—the extreme was a one-time staff member laggard in research whom he dubbed "a mountain of inertia." He had the ability to make firm and lasting friendships among a wide variety of people in various walks of life, low to high. I never heard him criticized adversely by any of the many in the university with whom he dealt.

To the President of the university, the faculty, staff, and students, even the children encountered on his daily walks, Padre was a friend.

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