

THE CONTRIBUTIONS OF THE SECOND ROBERT WILSON SHUFELDT
AND HIS FAMILY TO NEW MEXICO ORNITHOLOGY IN 1884-1949

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Three generations of the extended family of the second Robert Wilson Shufeldt (1850-1934) have contributed to our knowledge of the ornithology of New Mexico, beginning with this man (henceforth here referred to as RWS2) in 1884-1888--when he was a surgeon in the United States Army stationed at Fort Wingate, as well as informally functioning as a naturalist in the Zuni Mountains and vicinity in present McKinley and Cibola counties (e.g., W.W. Cooke *in* Bailey 1928:23). While there, RWS2 (i.e., Shufeldt[II] 1895a:104) was assisted in various ornithological and related endeavors by his two sons--namely, the third Robert Wilson Shufeldt (RWS3; 1877-1892) and Percy Welles Shufeldt (PWS; 1878-1949). In my opinion, the main contributions of RWS2, RWS3, and PWS to New Mexico ornithology during the period 1884-1888 was their collection, preparation, and preservation of at least 107 specimens of 54 species of birds in and near the Zuni Mountains, of which 22 of the taxa had not been previously verified there by ornithologists working in the area in the years 1850-1876 (Appendix 1). RWS2 also published several notes on the birds of that region (e.g., Shufeldt[II] 1885b, 1887, 1888, 1889a), described a new species of mouse from Fort Wingate (1885c), and published two brief anthropological papers on the local Zuni and Navajo peoples (1885a, 1889b). Of these three named Shufeldts, only PWS is known to have returned to New Mexico to live and continue collecting and presumably doing other work on the state's birds--which he and the family did from their home place at La Cueva in Mora County from around 1932 until his death in late January 1949 (e.g., *Las Vegas Daily Optic* 1949a:1; Storer 1961:1-2; Hubbard 1962:i, iv; 1963:236-239; David Salman, pers. comm.). Based on the labels of 843 bird skins obtained by PWS and other individuals in that county and elsewhere in New Mexico during those years, it is clear that he was especially ably assisted in amassing that material by his son--the fourth Robert Wilson Shufeldt (RWS4), whose dates of birth and presumed death I have not yet been able to ascertain. For example, while 433 (51.3%) of those specimens are shown as having been collected by PWS, another 336 (39.9%) were taken by RWS4--versus 43 (5.1%) by up to 24 additional collectors, and 31 (3.7%) by unspecified persons. In any case, it is also clear that regardless of who actually collected these birds, this entire collection was first and foremost the property and therefore the ornithological legacy of PWS--who passed it on to RWS4, neither of whom ever seems to have published on any of these New Mexico specimens.

RWS2 was named after his father, who ultimately attained the position of rear admiral in the United States Navy--and whose own ornithological interests included the birds of Nicaragua and the Isthmus of Tehuantepec in southern Mexico (Hume 1942:390; Storer 1961:1). RWS2 was born in New York on 1 December 1850 and died at Washington, D.C. on 21 January 1934, with burial at the Arlington National Cemetery in adjacent northern Virginia (Palmer 1934:282; Lambrecht 1935:359, 361; Hume op. cit.:411). RWS2's involvement with birds had become evident by the time of the Civil War in the United States, during which period his father's naval service took the family to Havana, Cuba and other nearby maritime land stations (Hume op. cit.:390-394). After that, RWS2 returned home to Stamford, Connecticut, where he continued his education and learned to prepare birds as scientific specimens. He later enrolled at Cornell University, where he graduated in the class of 1871 with training in medicine--which subsequently led to his successful pursuit of a medical degree at what is now George Washington University (Hume op. cit.:394-395). RWS2 received his M.D. in 1876, when he also

enlisted in the U.S. Army as an assistant surgeon and married Miss Catherine Babcock--with whom he sired two sons: Robert Wilson Shufeldt III (RWS3), who was born at Omaha, Nebraska on 7 June 1877 and drowned in the Ohio River near Kerr Island, West Virginia on 11 July 1892 (Hulbert 1892:398-399; McKenney *in* Hulbert op. cit.:398); and Percy Welles Shufeldt (PWS), who was born at a still undetermined location in December 1878 and died at La Cueva Ranch, Mora Co., New Mexico on 27 January 1949 (Storer *ibid.*).

RWS2 is known to have conducted ornithological research in New Mexico from 1884 through 1888, during which time he was in charge of the medical department at Fort Wingate in the western Zuni Mountains of present McKinley Co. (W.W. Cooke *in* Bailey 1928:23). I have been unable to determine exactly when RWS2 and his family arrived at and/or departed from this post, where he variously described that tour of duty there as lasting “four years and more (1884-1888)” and “nearly five years” (R.W. Shufeldt [II] 1889a:72 and 1895:102, respectively). However, his place of residence in 1889 was shown as Fort Wingate in a note published in January of that year (R.W. Shufeldt [II] 1889a:74), versus “Takoma, D.C.” in another article later submitted by him on 16 July (R.W. Shufeldt [II] 1889b:50)—which locality I presume either became part of or was adjacent to what is now Takoma Park in Montgomery Co., Maryland. Based on this information, it seems certain that sometime between late 1888 and mid-1889, RWS2 moved his family from New Mexico to the District of Columbia area—where at least he and PWS were still living on 26 August 1895, when the latter collected a nest containing two live young Eastern Wood-Pewees (*Contopus virens*) as noted and photographed by R.W. Shufeldt[II] (1895b:14-15). Given these and related facts, it is clear that Professor Lambrecht (1935:359; also Hume 1942:398) erred in placing RWS2 at Fort Wingate through 1891--which is in fact the year that he retired from the U.S. Army on a medical disability. Assuming their labeled dates of collection are correct, also doubtlessly mis-attributed to Fort Wingate are four Shufeldt birdskins collected after 1884-1888 and recently obtained by the University of New Mexico Museum of Southwestern Biology: namely one each Red-eyed Vireo (*Vireo olivaceus* ssp.?) on 26 May 1889 (MSB 25088); Loggerhead Shrike (*Lanius ludovicianus* ssp.?), 22 November 1890 (MSB 25086); Eastern Phoebe (*Sayornis phoebe*), 17 April 1891 (MSB 25108); and Brown Thrasher (*Toxostoma rufum* cf. *rufum*), 10 September 1892 (MSB 25075).

The preceding four specimens are part of a collection of 36 birdskins exchanged to the MSB by Kansas State University, which according to the labels had previously been on loan to Ohio University from Marietta College in Marietta, Ohio. The latter institution had received them from RWS2 shortly after the demise of RWS3, who had been a student there from January until his unfortunate drowning in the nearby Ohio River on 11 July 1892 (Hulbert 1892:398-399). In acknowledging this donation, faculty secretary T.F. McKenney (*in* Hulbert op. cit.:398) wrote: “It gives us great pleasure to accept from Dr. R.W. Shufeldt[II] of Takoma Park, D.C., the private ornithological collection of his son in whose memory it shall be preserved in the College Museum as ‘The Shufeldt Collection.’” After these 36 specimens were placed on loan to Ohio University, each received a new label on one side of which is printed: “Ohio University Zoology Collection. On loan from Marietta [Ohio] College Museum. Fort Wingate, N.M. P[aul] W[elles] Shufeldt Coll[ector or Collection].” On the other side, the label of each specimen has handwritten in ink its specific or subspecific identification, date of collection, and usually the sex and sometimes the age of the bird. At some point in time, any original labels attached to these specimens were obviously removed and presumably destroyed, discarded, lost, or otherwise disassociated from them. In the process of that relabeling, I suspect that the localities for the above four 1889-1892 skins were somehow inadvertently changed from Takoma Park, D.C. to Fort Wingate, N.M. For example, with so few specimens from the former locality, the decision

could have been made to imprint all of the labels with Fort Wingate, N.M. Once attached to these four specimens, then that locality might have been slated to be inked out and replaced with Takoma Park, D.C. However, this step may never have been carried out, or perhaps it was done in pencil only to have the changes disappear over time. Finally, I wonder if the reference to PWS on the replacement labels is a typographical error for either RWS2 or RWS3, or does it indicate that Percy Welles Shufeldt was the actual source of these 36 specimens?

As for the remaining 32 of these now MSB skins (above), their replacement labels indicate that all were taken at Fort Wingate between the spring of 1887 and 25 December 1888. Collectively, they represent 19 species of birds, each of which was previously known and/or has subsequently been found in the Zuni Mountains and vicinity of McKinley and Cibola cos., New Mexico. To these may be added 75 additional avian specimens in other collections, all of which are known or presumed to have been collected by RWS2 in the Fort Wingate area between 25 December 1884 and 1 December 1888. Sixty-five of these (i.e., 49 fluid preparations, 11 museum skins, three skeletons, one eggset, and one slide mount) are in U.S. National Museum (USNM), while a single skin is in the Museum of Zoology (MVZ) at the University of California at Berkeley; two skins are in the Western Foundation of Vertebrate Zoology (WFVZ); three skins in the University of Michigan Museum of Zoology (UMMZ); and four skeletons in Yale University's Peabody Museum (YPM). Together with the preceding 32 MSB skins, this material amounts to 107 specimens of 54 species of birds—again all previously known or subsequently found in the Zuni Mountains and vicinity. RWS2 also reported finding five additional avian species and two subspecies in the Fort Wingate area for which I have not located any of his specimens: an Acorn Woodpecker (*Melanerpes formicivorus bairdii*) collected by him about two miles from the post on 6 August 1887 (R.W. Shufeldt[II] 1887:345-346); a Lewis' Woodpecker (*M. lewis*) observed by RWS3 at Fort Wingate on 7 May 1888, with four seen and one collected by RWS2 the next day within two miles of that locality (R.W. Shufeldt[II] 1888:319-320); and several Mallards (*Anas platyrhynchos*), Green-winged Teal (*A. crecca carolinensis*), and one Cinnamon Teal (*A. cyanoptera*) encountered by RWS2 and his two sons on unspecified dates along a stream at the mouth of a "superb canyon" at "The Milk Ranch," about two miles west of the fort (R.W. Shufeldt[II] 1895a:104)—with no specific specimens cited. Finally is RWS2's report of having found the Great Horned Owl (*Bubo virginianus*) to be the "most common" member of its taxonomic order in the Zuni region (R.W. Shufeldt[II] 1885a:266), which brings his 1884-1888 listing of birds there to a grand total of 60 species (Appendix 1).

RWS2 was one of several 19th-century ornithologists to have documented the birdlife of the Zuni Mountains and the immediate vicinity, with others including Samuel Washington Woodhouse in 1850, the duo of Caleb Burwell Rowan Kennerly and Heinrich Balduin (or Baldwin) Möllhausen in 1853, Elliott Coues in 1864, Henry Wetherbee Henshaw in 1873-1875, and Charles Edward Howard Aiken in 1876 (Cooke *in* Bailey 1928:19-22). Many of their records were obtained along a route that led from the 1862-1868 site of Fort Wingate (then located near present San Rafael, Cibola Co., Julyan 1998:137) southwestward up Zuni Canyon along a series of montane springs, then through the Oso Ridge area over what was once called Whipple Pass to the valley containing Inscription Rock (now El Morro National Monument), and thence westward in today's McKinley Co. past Ojo Pescado and the Rio Pescado to the pueblos of Zuni and formerly Hawikuh. In fact, other than RWS2, Henshaw is the only one of these early naturalists to have studied birds in the vicinity of the present Fort Wingate. In any case, my unpublished compilation reveals that between 1850 and 1876, those men reliably recorded a total of 69 species of birds in the overall Zuni Mountains region (Appendix 1). Of these species, 33 were subsequently found there by RWS2, plus he added another 27—bringing the area's cumulative

total to 96 for the period 1850-1888. Among his additions were the first published records of the Acorn and Lewis' woodpeckers in the range (see above), along with those of the Evening Grosbeak (*Coccothraustes vespertinus*)—which RWS2 documented in the Fort Wingate area during October -November 1888 (R.W. Shufeldt[II] 1889). Later, two of his other birdskins from there became the types of new subspecies, the first being H. K. Coale's (1887:330-331) *Junco hyemalis shufeldti* (U.S. Nat. Mus. 106035)—which represents a population of the Dark-eyed Junco that nests in the Pacific Northwest and winters southward to the Southwest and adjacent Mexico (A.O.U. 1957:610). The other was *Cistothorus palustris plesius* as described by H.C. Oberholser (1897:188-190), which is the nesting and frequently resident Marsh Wren of much of the inland western U.S. and British Columbia (A.O.U. op. cit.:419). Various of RWS2's other Fort Wingate bird records have been published elsewhere (e.g., Bailey 1928), although I have never found them all previously compiled in one place as shown in Appendix 1.

While RWS2 was stationed at Fort Wingate, his son RWS3 progressed from being a boy of about seven years to a pre-adolescent of nearly 11½—based on his birth date of 7 June 1877 (McKenney *in* Hulbert 1892:398). Over the same period, PWS aged from about five-and-a-half to ten years old—given that he must have been born in December 1878 (see Storer 1961:1). Despite their youth, RWS2 indicated that the two boys had been “a great comfort” to him at Fort Wingate, especially toward the end of his tour there—when he was confined to the post vicinity and waiting to be tried by the U.S. Army on unspecified charges (R.W. Shufeldt[II]:102, 104)! During that time, RWS2 indicated that he and his sons had “rambled for months all over the country to which I was restricted by virtue of my arrest.” Indeed, on one occasion when in the field with RWS3 near the Milk Ranch, RWS2 wrote that the two of them had “nearly lost our lives” when caught in a flash flood in a nearby canyon. Besides being in the field together with his boys, RWS2 also taught them to prepare specimens and to identify if not collect birds as well. For example, RWS2 shot several Evening Grosbeaks in the Fort Wingate area in late 1888 (R.W. Shufeldt[II] 1889), from which he “made up, with the assistance of my sons, a fine series of skins and skeletons” (R.W. Shufeldt[II] 1895a:104). By the time of RWS3's drowning death at 15 years of age in the Ohio River on 11 July 1892, he had already become an accomplished ornithologist. For example, he was remembered by the faculty at Marietta College as “an ambitious young scientist of unusual promise” (McKenny *ibid.*), whose loss would be felt by “all and especially...American science in the years to come” (Hulbert op. cit.:399). As for PWS, he would also be later recognized for his ornithological accomplishments, especially his collections of birds from Mexico, Guatemala, British Honduras (now Belize), and New Mexico (Storer op. cit.:1-2). Meanwhile, I know very little about his activities during the interim, although he was obviously at Takoma Park in August 1895 (R.W. Shufeldt[II] 1920:123-124). That same year PWS turned 17 and RWS2 married Florence Audubon, a granddaughter of John James Audubon (Lambrecht 1935:360). Six years later, PWS published a note on a Common Ground-Dove (*Columbina passerina*) that he collected near Lynchburg, Virginia in November 1900, with his address being given as Washington, D.C. (P.W. Shufeldt 1901).

By 1905 and continuing into 1932, PWS resided in Latin America—with the first 12-13 of those years spent in southern Mexico in the states of Veracruz, Oaxaca, and Campeche, the next eight or so in Guatemala, and the final seven or more in present Belize—as reconstructed from the 2352 birds that he collected during that period, and which his son Robert Wilson Shufeldt IV (RWS4) later deposited in the Museum of Zoology (UMMZ) at the University of Michigan (Storer 1961:1-2). In addition, PWS had obtained a few birds in the Lake Petén area of northern Guatemala in December 1917-January 1918, with the specimens deposited in the USNM (van Tyne 1935:5, 15, etc.). These collections were presumably made by PWS primarily for

avocational purposes, as he does not appear to have been in the business of selling or exchanging his specimens. Nor did he publish much about them, with one of the few instances being his note on the plumage abnormalities observed by him in Ocellated Turkeys (*Agriocharis* [= *Meleagris*] *ocellata*) in Campeche (P.W. Shufeldt 1913). Another was his report of the first known nesting by the Blue Grosbeak (*Passerina caerulea chiapensis*) in Oaxaca, which he documented near the family home in Tehuantepec (P.W. Shufeldt 1917). In time, many of the UMMZ skins were published on by other ornithologists, including Storer's (op. cit.:3-19) treatment of the material collected by PWS in Campeche. Others were treated in such works as Russell's (1964) distributional survey of the birds of what is now Belize and that of Binford (1989) on those of Oaxaca. PWS's sources of income during these Latin American years certainly included his "chicle and timber interests," as cited by Storer (op. cit.:1). This reference to "chicle" is to the resin produced by the sapodilla tree (*Manilkara zapota*; Sapotaceae), which has long been used in the manufacture of chewing gum. PWS is known to have harvested this product for six years on a tract of land in Guatemala, only to have his 10-year contract for that work terminated by the legislature there on 22 May 1928 (Sisnett 1930:813). That action occurred about two months after he had won a monetary judgment against the Wrigley company over chicle sales, which at least partially offset the loss of income from this termination. Nonetheless, PWS proceeded to sue the Guatemalan government for having breached his contract, for he was awarded him \$225,468.38 in damages on 24 July 1930 (Sisnett op. cit.:821). Then in September 1931, a "hurricane and accompanying tidal wave...devastated Belize," causing PWS to lose his bird notes (Storer op. cit.:1) and doubtlessly other possessions. In 1932, PWS collected his last bird specimens in that country and first at the historic La Cueva Ranch in Mora Co., New Mexico--which would serve as his home until he died at the age of 71 years and one month on 27 January 1949 (Storer op. cit.:1-2), and for his family until it was sold in 1960 (*The New Mexican*, 4 March 2010).

According to the *Las Vegas Daily Optic* (70th year, no. 72:1, 27 January 1949), PWS had "purchased the extensive...holdings of the La Cueva Ranch in 1933"--where he "engaged in sheep and cattle raising and fruit growing" until his death, which occurred at St. Anthony's Hospital in Las Vegas, New Mexico. He was survived by his widow Mrs. Gwendolyn H. Shufeldt; two sons RWS4 and Henry [Enrique] Shufeldt; three daughters Mrs. C.E. Gidden, Louisa Shufeldt, and Guillermina Shufeldt; seven grandchildren; and a sister Mrs. F.C. Decker. PWS was interred in the family cemetery at La Cueva four days later, following a Sunday morning mass at the local Catholic church (*Las Vegas Daily Optic*, 70th year, no. 75:1, 31 January 1949). No mention was made in these newspaper articles of PWS's interests in nature, nor of his extensive collection of birds from La Cueva Ranch and elsewhere in New Mexico--of which Storer (1961:1-2) indicated that 795 Mora Co. skins had been donated to the UMMZ by RWS4 late 1949. As a graduate student at the University of Michigan, I had the privilege of studying this material as part of a taxonomic assessment of the New Mexico birds in its ornithological collection (Hubbard 1962). That study included 714 skins of 158 species obtained by PWS and others at La Cueva and La Cueva Ranch, 76 skins and an additional seven species from elsewhere in Mora Co., and 18 skins plus three more species from five other New Mexico counties (Colfax, Guadalupe, San Miguel, Sierra, and Socorro)--for grand totals of 808 skins of 168 species, all taken in the period 1932-1949. In the late 1960's or early 1970's at the USNM, I examined another 33 skins that had also been collected by PWS and others in Mora Co. in 1934-1947. Although these involved no additional species, together with the UMMZ material they increased the number of skins to 841--with 745 being from La Cueva/La Cueva Ranch and 78 from elsewhere in Mora Co. (Appendix 2), but with none beyond the preceding 18 from other New Mexico counties. Of these total skins, 433 were labeled as collected by PWS,

336 by RWS4, and 44 by many as 24 other individuals (Appendix 3, including one by “Joe B.”)—with 28 not attributed to any collector.

As far as I am aware, none of PWS’s New Mexico birds (above) had appeared in print until the publication of my paper on noteworthy specimens from the state in the UMMZ collection (Hubbard 1963:236-239)—which includes 37 of his La Cueva Ranch skins representing 12 species, three subspecies, and two hybrids between taxa then classified as species. Among these were the first state specimens of the Black Swift (*Cypseloides niger*), Great Crested Flycatcher (*Myiarchus crinitus*), Eastern Bluebird (*Sialia sialis*), and nominate subspecies of the American Robin (*Turdus migratorius migratorius*), along with a northerly occurrence of the Mexican form of the Red Crossbill (*Loxia curvirostra stricklandi*). Beyond “noteworthy” records, PWS’s collection is also a significant source of other information on the birds of New Mexico—most notably as regards the composition of the avifauna of Mora Co. in 1932-1949. In addition, it also provides insights into the relative abundance, seasonal occurrence, systematics, and related aspects of the status of the component taxa during that period. Such data are especially desirable for an ecologically diverse area like La Cueva Ranch and vicinity, the birds of which had been virtually unknown prior to the arrival there of PWS and his family. As part of the Mora Land Grant of 1835, the ranch had been established in the 1850’s by Vicente Romero—who produced grain and other agricultural products for nearby Fort Union (Julyan 1998:189, 234). The few birds recorded in that general area during the historic period were mostly from travelers along the Santa Fe Trail, the main route of which was about 12 miles (or 19 km) east of La Cueva (e.g., Duffus 1975:map). For example, on 4 January 1847, Lt. James W. Abert (*in* Galvin 1966:80) reported shooting “a fine magpie, *Pica melanoleuca* [= *hudsonia*]” and seeing “ravens [probably *Corax corax*]” near that trail between the “Río Moro” [=Mora River] and Ocate Creek. On the other hand, Major Stephen H. Long and his party surely did not encounter any birds on or near what became La Cueva Ranch in the summer of 1820—when Cooke (*in* Bailey 1928:17) speculated that they had followed the Mora River downstream from the Sangre de Cristo Mountains to the Canadian River. Instead, they must have entered New Mexico some 125 miles (or 201 km) northeast of the ranch near present Folsom, Union Co., then traveled southward past Sierra Grande and down Ute Creek to the Canadian, and thence east into Texas (Tucker 1963:202-218, fig. 1).

Soon after the death of PWS, his heirs sold La Cueva Ranch to the Salman family of Houston, Texas—which still retains ownership of a portion of the land and water rights, the oldest part of the living quarters, and the historic mill, which now houses a cafe, store, and outlet for raspberries and other agricultural products that are grown there (Bellinger 2006:13). The Salmans had begun visiting the ranch as friends of the Shufeldts while PWS was alive, as recounted to me by David Salman (pers. comm.)—who first remembers being there in 1942, when he was just six years old. Among his early memories is that of a special room in the main house where PWS kept his bird collection, access to either of which was seldom granted to other people and always under the old gentleman’s close supervision! Once the ranch was acquired by the Salmans, they continued the practices of growing fruit, produce, and other crops on the irrigated areas and raising livestock elsewhere. In the meantime, the family maintained or enhanced the extensive and diverse habitats used by wildlife there, including by permitting part of the property to be designated as La Cueva State Game Refuge from 30 September 1957 until 28 August 1981 (N.M.D.G.F. 2001:3). This designation applied to an area centered on La Cueva, Red, and Horse lakes, which had long ago been created by damming one or more small tributaries of the Mora River. After initially serving as a resting place for migrant and wintering waterfowl, the refuge later became a reintroduction site for nesting Canada Geese (*Branta*

canadensis)—the first young of which were produced there about 1960 (J. L. Sands in Hubbard et al 1970:1). After the death of PWS, the systematic documentation of the avifauna ceased at La Cueva Ranch, although waterfowl usage there was monitored by wildlife personnel during its tenure as a refuge. In addition, the refugial area was also periodically visited by other people, and some of their bird records were published in such outlets as the *New Mexico Ornithological Society Field Notes* and *Audubon Field Notes* and its various successors.

Given the paucity of early bird records from La Cueva Ranch and vicinity, I cannot definitively state how its historical avifauna may have compared to that later documented by the Shufeldts in 1932-1949 (Appendix 2). To make such comparisons, one must instead turn to the next best sources of information—which I find to be those available on the birds of the Las Vegas area, San Miguel Co., New Mexico, which city is located approximately 23 miles (or 37 km) south of La Cueva. Both of these sites are situated in well-watered drainages in the northeastern region of the state where the high plains contact the eastern foothills of the Sangre de Cristo Mountains. The largely native habitats there include extensive shortgrass prairies interspersed with woodlands dominated by junipers (*Juniperus* spp.), Colorado pinyon (*Pinus edulis*), and oaks (e.g., *Quercus undulata*), stands of cottonwoods (*Populus* spp.), willows (*Salix* spp.), introduced Siberian elms (*Ulmus pumila*), and other deciduous trees and shrubs along the streams, and stringers of ponderosa pine (*Pinus ponderosa*) and other montane plants in canyons and on similarly sheltered sites. Although the settlement of Nuestra Señora de las Vegas was founded in 1823 by Luis María C[abeza] de Baca (Julyan 1998:200), the avifauna of that area was not extensively documented until Charles F. Batchelder (1885) published an annotated list of the birds encountered by him at nearby Las Vegas Hot Springs on December 4-23, 1882. These consisted of what are now regarded as 27 species, of which 22 were verified by Batchelder's collection of 89 study skins that mainly remain in the MCZ. Twenty-six of these taxa were later taken by the Shufeldts at La Cueva Ranch, while the 27th was obtained by them elsewhere in Mora Co. The next publication to treat the birds of the Las Vegas area was that of Walton I. Mitchell (1898), who recorded 85 species there and in the mountains of San Miguel Co. between January and June 1898. Although Mitchell mentioned collecting several clutches of birds' eggs and three skins on that trip, I have only located a total of six of his oological sets (Del and FMNH):—i.e., one each of the Williamson's Sapsucker (*Sphyrapicus thyroideus*), Say's Phoebe (*Sayornis saya*), Steller's Jay (*Cyanocitta stelleri*), Western Bluebird (*Sialia mexicana*), Green-tailed Towhee (*Pipilo chlorurus*), and Song Sparrow (*Melospiza melodia*). Sixty-six of these taxa were also collected by the Shufeldts at La Cueva Ranch and two in other parts of Mora Co., for a total of 68 or 80.0%. Of the remaining 15 species that were not collected in Mora Co. by the Shufeldts, certainly occurring there during their time and subsequently were the Turkey Vulture (*Cathartes aura*), Golden Eagle (*Aquila chrysaetos*), Wild Turkey (*Meleagris gallopavo*), Mountain Plover (*Charadrius montanus*), Black-chinned Hummingbird (*Archilochus alexandri*), "California" [= Acorn] Woodpecker (*Melanerpes formicivorus*), Gray Jay (*Perisoreus canadensis*), and Clark's Nutcracker (*Nucifraga columbiana*) and probably the American Bittern (*Botaurus lentiginosus*), "Gambel's" [= Scaled) Quail (*Callipepla "gambel" [= squamata]*), Black-necked Stilt (*Himantopus mexicanus*), Western Screech-Owl (*Otus kennicottii*), Burrowing Owl (*Athene cunicularia*), and Bewick's Wren (*Thryomanes bewickii*). This leaves only one species that may not have been present in Mora Co. and thus available to the Shufeldts, that being the Spotted Owl (*Strix occidentalis*)—of which Mitchell (op. cit.:303) reported only "two individuals," both found by him in "December [1897], about twenty miles [= 32 km] from Las Vegas ...at...9,500 feet." They also obtained specimens of two others at the ranch that Mitchell (op. cit.:310) had doubtlessly misidentified, namely his breeding "*Vireo huttoni stephensi*. Stephen's [=Hutton's] Vireo" and "*Pipilo aberti*. Abert's Towhee"—which I presume were actually and

respectively the Spotted Towhee (*P. maculatus*) and Warbling Vireo (*V. gilvus*), neither of which did he list!

(Another historical ornithological database that someone could and should eventually closely compare with the Shufeldts' material from the La Cueva Ranch and vicinity consists of the largely unpublished, extensive, and diverse collection of birds made in the Las Vegas area by Austin P. Smith in 1914-1919--which by my most recent count consists of 954 study skins of 148 species, of which 918 of these specimens are in the MCZ, 33 the AMNH, and three in the "Berlin Museum" [fide A.R. Phillips, in litt. 1966]. Among the most notable of these taxa in terms of their occurrence around Las Vegas, if not New Mexico as a whole are: one Montezuma Quail, *Cyrtonyx montezumae*; three Semipalmated Sandpipers, *Calidris pusillus*; two Northern Phalaropes, *Phalaropus lobatus*; one Lesser Nighthawk, *Chordeiles acutipennis*; one Gray Flycatcher, *Empidonax wrightii*; two Fox Sparrows, *Paserella iliaca zaboria* and *P. i. schistacea*; and a Harris' Sparrow, *Zonotrichia querula*. Incidentally, I have this, the Shufeldts', and certain other important New Mexico bird collections available as Excel databases for anyone that might be interested in having them.)

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I first wish to thank the curatorial staffs of all the collections containing bird specimens collected in New Mexico by the Robert Wilson Shufeldt[II] family, including at the Museum of Vertebrate Zoology (MVZ), University of California at Berkeley; United States National Museum of Natural History (USNM); University of Michigan Museum of Zoology (UMMZ); University of New Mexico Museum of Southwestern Biology (MSB); Western Foundation of Vertebrate Zoology (WFVZ); and Yale University Peabody Museum (YPM). In addition, I am very grateful to the late David Milton Salman (1936-2010) for having shared with me some of his many memories from having lived on the La Cueva Ranch beginning in 1960--when the Salman family purchased the place, and which its members wholly owned until 2002 (*The New Mexican*, 4 March 2010:A-10). Others who I wish to acknowledge for having variously contributed to my efforts to document the Shufeldts' 65 years (i.e., 1884-1949) of having contributed to our knowledge of New Mexico's avifauna include: Ellen Nora Cavanaugh, Claudia G. Crawford, Robert W. Dickerman, the late William S. Huey, Andrew B. Johnson, the late Roxie C. Laybourne, D. Archibald McCallum, the late Raymond J. Paynter, Allison Pirie, James L. Sands, C. Gregory Schmitt, the late Robert W. Storer, John Trochet, James R. Vaught, and doubtlessly several other people whose names elude me at the moment! Finally, let me express my enduring appreciation to several other earlier naturalists and biologists along with the Shufeldts for having recorded at least some of the birds that they encountered in the La Cueva-Las Vegas and Zuni Mountains regions of New Mexico, beginning with Abert in 1846-1847, Woodhouse in 1850, Kennerly and Möllhausen 1853, Coues 1864, Henshaw 1873-1875, Aiken 1876, Batchelder 1882, Mitchell in 1898, and Smith in 1914-1919 .

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APPENDIX 1. Bird taxa recorded in the Zuni Mountains and vicinity, McKinley and Cibola cos., New Mexico between 1850 and 1888, as based on Hubbard (unpublished). One asterisk (*) indicates a species detected only by Woodhouse, Kennerly, Möllhausen, Henshaw, and/or Aiken in 1850-1876; two asterisks (**) indicate a species detected only by the Shufeldts in 1884-1888; and three asterisks (***) indicate a species detected by both of these groups of ornithologists in 1850-1888.

ACCEPTED SPECIES

- *Great Blue Heron (*Ardea herodias*)
- **Mallard (*Anas platyrhynchos*).
- ***Cinnamon Teal (*Anas cyanoptera*).
- ***Green-winged Teal (*Anas crecca carolinensis*).
- **Swainson's Hawk (*Buteo swainsoni*).
- *Rough-legged Hawk (*Buteo lagopus*).
- **Merlin (*Falco columbarius*).
- *Sandhill Crane (*Grus canadensis*).
- **Killdeer (*Charadrius vociferus*).
- *Greater Yellowlegs (*Tringa melanoleuca*).
- *Lesser Yellowlegs (*Tringa flavipes*).
- **Solitary Sandpiper (*Tringa solitaria*).
- *Willet (*Catoptrophorus inornatus*).
- **Western Sandpiper (*Calidris mauri*).
- *Least Sandpiper (*Calidris minutilla*).
- *Baird's Sandpiper (*Calidris bairdii*).
- **Western Screech-Owl (*Megascops kennicottii*).
- **Great Horned Owl (*Bubo virginianus*).
- ***Burrowing Owl (*Athene cunicularia*).
- **Common Nighthawk (*Chordeiles minor*).
- **Common Poorwill (*Phalaenoptilus nuttallii*).
- ***White-throated Swift (*Aeronautes saxatalis*).
- **Black-chinned Hummingbird (*Archilochus alexandri*).
- ***Calliope Hummingbird (*Stellula calliope*).
- *Broad-tailed Hummingbird (*Selasphorus platycercus*).
- ***Rufous Hummingbird (*Selasphorus rufus*).
- **Lewis's Woodpecker (*Melanerpes lewis*).
- **Acorn Woodpecker (*Melanerpes formicivorus*).
- *Williamson's Sapsucker (*Sphyrapicus thyroideus*).
- **Red-naped Sapsucker (*Sphyrapicus nuchalis*).
- **Downy Woodpecker (*Picoides pubescens*).
- ***Hairy Woodpecker (*Picoides villosus*).
- **Northern Flicker (*Colaptes cafer*).
- *Western Wood-Pewee (*Contopus sordidulus*).
- *Gray Flycatcher (*Empidonax wrightii*).
- *Cordilleran Flycatcher (*Empidonax occidentalis*).
- *Buff-breasted Flycatcher (*Empidonax fulvifrons*).
- ***Say's phoebe (*Sayornis saya*).
- *Ash-throated flycatcher (*Myiarchus cinerascens*).
- *Cassin's Kingbird (*Tyrannus vociferans*).
- *Western Kingbird (*Tyrannus verticalis*).
- *Loggerhead Shrike (*Lanius ludovicianus*).
- *Plumbeous Vireo (*Vireo plumbeus*).
- *Steller's Jay (*Cyanocitta stelleri*).
- *Western Scrub-Jay (*Aphelocoma californica*).
- ***Pinyon Jay (*Gymnorhinus cyanocephalus*).
- *Clark's Nutcracker (*Nucifraga columbiana*).

*****Common Raven (*Corvus corax*).**
 *Horned Lark (*Eremophila alpestris*).
****Purple Martin (*Progne subis*).**
*****Violet-green Swallow (*Tachycineta thalassina*).**
*****Northern Rough-winged Swallow (*Stelgidopteryx ruficollis*).**
*****Bank Swallow (*Riparia riparia*).**
*****Cliff Swallow (*Petrochelidon pyrrhonota*).**
****Barn Swallow (*Hirundo rustica*).**
*****Mountain Chickadee (*Poecile gambeli*).**
*****Bushtit (*Psaltriparus minimus*).**
 *White-breasted Nuthatch (*Sitta carolinensis*).
*****Pygmy Nuthatch (*Sitta pygmaea*).**
*****Rock Wren (*Salpinctes obsoletus*).**
****Marsh Wren (*Cistothorus palustris*).**
*****Blue-gray Gnatcatcher (*Polioptila caerulea*).**
*****Mountain Bluebird (*Sialia currucoides*).**
*****Western Bluebird (*Sialia mexicana*).**
*****Townsend's Solitaire (*Myadestes townsendi*).**
*****American Robin (*Turdus migratorius*).**
*****Northern Mockingbird (*Mimus polyglottos*).**
*****Sage Thrasher (*Oreoscoptes montanus*).**
****Virginia's Warbler (*Vermivora virginiae*).**
**** (Audubon's) Yellow-rumped Warbler (*Dendroica coronata auduboni*).**
****Black-Throated Gray Warbler (*Dendroica nigrescens*).**
 *Grace's Warbler (*Dendroica graciae*).
 *Yellow-breasted Chat (*Icteria virens*).
 *Hepatic Tanager (*Piranga flava*).
 *Western Tanager (*Piranga ludoviciana*).
*****Green-tailed Towhee (*Pipilo chlorurus*).**
 *Spotted Towhee (*Pipilo maculatus*).
 *Chipping Sparrow (*Spizella passerina*).
 *Brewer's Sparrow (*Spizella breweri*).
 *Black-throated Sparrow (*Amphispiza bilineata*).
 *Vesper Sparrow (*Pooecetes gramineus*).
****Lark Sparrow (*Chondestes grammacus*).**
*****Lark Bunting (*Calamospiza melanocorys*).**
 *Savannah Sparrow (*Passerculus sandwichensis*).
*****Dark-eyed Junco (*Junco hyemalis shufeldti* and *J. h. caniceps*).**
*****Black-headed Grosbeak (*Pheucticus melanocephalus*).**
 *Lazuli Bunting (*Passerina amoena*).
***Dickcissel (*Spiza americana*).**
*****Red-winged Blackbird (*Agelaius phoeniceus*).**
****Western Meadowlark (*Sturnella neglecta*).**
*****Yellow-headed Blackbird (*Xanthocephalus xanthocephalus*).**
****Brewer's Blackbird (*Euphagus cyanocephalus*).**
****Brown-headed Cowbird (*Molothrus ater*).**
*****Cassin's Finch (*Carpodacus cassinii*).**
*****Lesser Goldfinch (*Carduelis psaltria*).**
****Evening Grosbeak (*Coccothraustes vespertinus*).**

UNACCEPTED SPECIES

*Bald Eagle (*Haliaeetus leucocephalus*)--captives at Zuni Pueblo (Woodhouse and Henshaw)
 *Turkey (*Meleagris gallopavo*)--tame birds at Hawikuh Pueblo (Möllhausen).

- *Greater Pewee (*Contopus pertinax*)--queried record (Aiken).
- *Scissor-tailed Flycatcher (*Tyrannus forficatus*)--erroneous specimen record (Kennerly).
- *Painted Bunting (*Passerina ciris*)--erroneous specimens record (Kennerly).
- *Orchard Oriole (*Icterus spurius*)--erroneous specimen record (Kennerly)

APPENDIX 2. Bird taxa collected at La Cueva Ranch and vicinity, Mora Co., New Mexico in 1932-1949 by Percy Welles Shufeldt, Robert Wilson Shufeldt IV, and other individuals, except that those marked with an asterisk (*) were obtained at other localities in that county Hubbard (1962 and unpublished).

Pied-billed Grebe (*Podilymbus podiceps*).
Eared Grebe (*Podiceps nigricollis*).
Great Blue Heron (*Ardea herodias*).
Snowy Egret (*Egretta thula*).
Black-crowned Night-Heron (*Nycticorax nycticorax*).
White-faced Ibis (*Plegadis chihi*).
Tundra Swan (*Cygnus columbianus*).
Gadwall (*Anas strepera*).
American Wigeon (*Anas americana*).
Mallard (*Anas platyrhynchos*).
Blue-winged Teal (*Anas discors*).
Cinnamon Teal (*Anas cyanoptera*).
Northern Shoveler (*Anas clypeata*).
Northern Pintail (*Anas acuta*).
Green-winged Teal (*Anas crecca*).
Canvasback (*Aythya valisneria*).
Redhead (*Aythya americana*).
Lesser Scaup (*Aythya affinis*).
Bufflehead (*Bucephala albeola*).
Common Goldeneye (*Bucephala clangula*).
Common Merganser (*Mergus merganser*).
Ruddy Duck (*Oxyura jamaicensis*).
Northern Harrier (*Circus cyaneus*).
Sharp-shinned Hawk (*Accipiter striatus*).
Cooper's Hawk (*Accipiter cooperii*).
*Northern Goshawk (*Accipiter gentilis*).
Swainson's Hawk (*Buteo swainsoni*).
Red-tailed Hawk (*Buteo jamaicensis*).
Kestrel (*Falco sparverius*).
Merlin (*Falco columbarius*).
Prairie Falcon (*Falco mexicanus*).
*Blue Grouse (*Dendragapus obscurus*).
Virginia Rail (*Rallus limicola*).
Sora (*Porzana carolina*).
American Coot (*Fulica americana*).
Sandhill Crane (*Grus canadensis*).
Killdeer (*Charadrius vociferus*).
American Avocet (*Recurvirostra americana*).
Greater Yellowlegs (*Tringa melanoleuca*).
Lesser Yellowlegs (*Tringa flavipes*).
Solitary Sandpiper (*Tringa solitaria*).
Willet (*Catoptrophorus inornatus*).
Spotted Sandpiper (*Actitis macularia*).
Long-billed Curlew (*Numenius americanus*).
Western Sandpiper (*Calidris mauri*).
Least Sandpiper (*Calidris minutilla*).

Baird's Sandpiper (*Calidris bairdii*).
 Long-billed Dowitcher (*Limnodromus scolopaceus*).
 Wilson's Snipe (*Gallinago delicata*).
 Wilson's Phalarope (*Phalaropus tricolor*).
 Ring-billed Gull (*Larus delawarensis*).
 Black Tern (*Chlidonias niger*).
 *Band-tailed Pigeon (*Columba fasciata*).
 Mourning Dove (*Zenaida macroura*).
 Yellow-billed Cuckoo (*Coccyzus americanus*).
 Greater Roadrunner (*Geococcyx californianus*).
 Great Horned Owl (*Bubo virginianus*).
 Long-eared Owl (*Asio otus*).
 Short-eared Owl (*Asio flammeus*).
 Common Nighthawk (*Chordeiles minor*).
 Common Poorwill (*Phalaenoptilus nuttallii*).
 Black Swift (*Cypseloides niger*).
 White-throated Swift (*Aeronautes saxatalis*).
 Calliope Hummingbird (*Stellula calliope*).
 Broad-tailed Hummingbird (*Selasphorus platycercus*).
 Rufous Hummingbird (*Selasphorus rufus*).
 Belted Kingfisher (*Ceryle alcyon*).
 Lewis's Woodpecker (*Melanerpes lewis*).
 Red-headed Woodpecker (*Melanerpes erythrocephalus*).
 Williamson's Sapsucker (*Sphyrapicus thyroideus*).
 Red-naped Sapsucker (*Sphyrapicus nuchalis*).
 Ladder-backed Woodpecker (*Picoides scalaris*).
 Downy Woodpecker (*Picoides pubescens*).
 Hairy Woodpecker (*Picoides villosus*).
 Northern Flicker (*Colaptes cafer*).
 Olive-sided Flycatcher (*Contopus cooperi*).
 Western Wood-Pewee (*Contopus sordidulus*).
 Willow Flycatcher (*Empidonax traillii*).
 Hammond's Flycatcher (*Empidonax hammondii*).
 *Dusky Flycatcher (*Empidonax oberholseri*).
 Cordilleran Flycatcher (*Empidonax occidentalis*).
 Say's Phoebe (*Sayornis saya*).
 Great Crested Flycatcher (*Myiarchus crinitus*).
 Western Kingbird (*Tyrannus verticalis*).
 Eastern Kingbird (*Tyrannus tyrannus*).
 Loggerhead Shrike (*Lanius ludovicianus*).
 Northern Shrike (*Lanius leucubitor*).
 Plumbeous Vireo (*Vireo plumbeus*).
 Warbling Vireo (*Vireo gilvus*).
 Steller's Jay (*Cyanocitta stelleri*).
 Western Scrub-Jay (*Aphelocoma californica*).
 Pinyon Jay (*Gymnorhinus cyanocephalus*).
 Black-billed Magpie (*Pica hudsonia*).
 American Crow (*Corvus brachyrhynchos*).
 Common Raven (*Corvus corax*).
 Horned Lark (*Eremophila alpestris*).

Tree Swallow (*Tachycineta bicolor*).
 Violet-green Swallow (*Tachycineta thalassina*).
 Northern Rough-winged Swallow (*Stelgidopteryx ruficollis*).
 Bank Swallow (*Riparia riparia*).
 Cliff Swallow (*Petrochelidon pyrrhonota*).
 Barn Swallow (*Hirundo rustica*).
 Black-capped Chickadee (*Poecile atricapilla*).
 Mountain Chickadee (*Poecile gambeli*).
 Bushtit (*Psaltriparus minimus*).
 *Red-breasted Nuthatch (*Sitta canadensis*).
 White-breasted Nuthatch (*Sitta carolinensis*).
 Pygmy Nuthatch (*Sitta pygmaea*).
 Brown Creeper (*Certhia americana*).
 *Rock Wren (*Salpinctes obsoletus*).
 Canyon Wren (*Catherpes mexicanus*).
 House Wren (*Troglodytes aedon*).
 Marsh Wren (*Cistothorus palustris*).
 American Dipper (*Cinclus mexicanus*).
 Ruby-crowned Kinglet (*Regulus calendula*).
 Eastern Bluebird (*Sialia mexicana*).
 Western Bluebird (*Sialia mexicana*).
 Mountain Bluebird (*Sialia currucoides*).
 Townsend's Solitaire (*Myadestes townsendi*).
 Hermit Thrush (*Catharus guttatus*).
 American Robin (*Turdus migratorius*).
 Gray Catbird (*Dumetella carolinensis*).
 Sage Thrasher (*Oreoscoptes montanus*).
 European Starling (*Sturnus vulgaris*).
 American Pipit (*Anthus rubescens*).
 Cedar Waxwing (*Bombycilla cedrorum*).
 Orange-crowned Warbler (*Vermivora celata*).
 Virginia's Warbler (*Vermivora virginiae*).
 Yellow Warbler (*Dendroica petechia*).
 Yellow-rumped Warbler (*Dendroica c. coronata*, *D.c. auduboni*).
 Grace's Warbler (*Dendroica graciae*).
 MacGillivray's Warbler (*Oporornis tolmiei*).
 Common Yellowthroat (*Geothlypis trichas*).
 Wilson's Warbler (*Wilsonia pusilla*).
 *Yellow-breasted Chat (*Icteria virens*).
 Western Tanager (*Piranga ludoviciana*).
 Green-tailed Towhee (*Pipilo chlorurus*).
 Spotted Towhee (*Pipilo maculatus*).
 Canyon Towhee (*Pipilo fuscus*).
 American Tree Sparrow (*Spizella arborea*).
 Chipping Sparrow (*Spizella passerina*).
 Vesper Sparrow (*Pooecetes gramineus*).
 Lark Sparrow (*Chondestes grammacus*).
 Sage Sparrow (*Amphispiza belli*).
 Lark Bunting (*Calamospiza melanocorys*).

Savannah Sparrow (*Passerculus sandwichensis*).
Song Sparrow (*Melospiza melodia*).
White-crowned Sparrow (*Zonotrichia leucophrys*).
Dark-eyed Junco (*Junco hyemalis*).
Black-headed Grosbeak (*Pheucticus melanocephalus*).
Blue Grosbeak (*Passerina caerulea*).
Lazuli Bunting (*Passerina amoena*).
Red-winged Blackbird (*Agelaius phoeniceus*).
Western Meadowlark (*Sturnella neglecta*).
Yellow-headed Blackbird (*Xanthocephalus xanthocephalus*).
Brewer's Blackbird (*Euphagus cyanocephalus*).
Brown-headed Cowbird (*Molothrus ater*).
Bullock's Oriole (*Icterus bullockii*).
Cassin's Finch (*Carpodacus cassinii*).
*House Finch (*Carpodacus mexicanus*).
Red Crossbill (*Loxia curvirostra*).
Pine Siskin (*Carduelis pinus*).
Lesser Goldfinch (*Carduelis psaltria*).
American Goldfinch (*Carduelis tristis*).
Evening Grosbeak (*Coccothraustes vespertinus*).
House Sparrow (*Passer domesticus*).

Appendix 3. Other collectors of museum skins in the Percy Welles Shufeldt/Robert Wilson Shufeldt [IV] collection of birds from New Mexico, based on the former that was deposited in the University of Michigan Museum of Zoology in 1949.

<u>Name</u>	<u>No. Skins</u>	<u>Locality(ies)</u>	<u>Year(s)</u>
B., Joe	1	Mora, Mora Co.	1945
Barlowe, C.	1	La Cueva Ranch, Mora Co.	1940
Charlton, J.	1	La Cueva Ranch, Mora Co.	1938
Cridden[=Gidden?], C.S.	1	La Cueva Ranch, Mora Co.	1947
Gidden, C.E.	1	La Cueva Ranch, Mora Co.	1941
Gidden, C.S.	1	La Cueva Ranch, Mora Co.	1947
Gidden, D.	1	La Cueva Ranch, Mora Co.	1941
Gidden, S.	1	La Cueva Ranch, Mora Co.	1947
Gurule, J.	1	La Cueva Ranch, Mora Co.	1936
Harvey, A.D.	1	La Cueva Ranch, Mora Co.	1934
H[arvey], A.D.	3	La Cueva Ranch, Mora Co.	1935
Moore, C.	1	La Cueva Ranch, Mora Co.	1939
Porter, J.S.	4	La Cueva Ranch, Mora Co.	1944, 1946
Sandoval, S.	1	Springer, Colfax Co.	1941
Seth, J.O.	1	La Cueva Ranch, Mora Co.	1939
Shufeldt, E[nrique]	12	La Cueva Ranch, Mora Co.	1935, 1939, 1941, 1945
Shufeldt, H.	1	La Cueva Ranch, Mora Co.	1936
Shufeldt, Mrs. P.W.	2	La Cueva Ranch, Mora Co.	1937, 1942
Speiss, W.	1	La Cueva Ranch, Mora Co.	1938
Vo[=a]ga, R.	1	La Cueva Ranch, Mora Co.	1937
Weiley[=Werley?], J.	1	Rio la Casa, Mora Co.	1938
Werley, B.M.	2	Santa Rosa, Guadalupe Co.	1939
Werley, J.	1	La Cueva Ranch, Mora Co.	1939
	1	Las Vegas, San Miguel Co.	1940
Worley[=Werley?], J.	2	La Cueva Ranch, Mora Co.	1939

