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# **N. M. O. S. BULLETIN**

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## **FRANK STEPHENS: A CENTURY-AGO BIRDER IN NEW MEXICO**

By John P. Hubbard

Frank Stephens (1849-1937) was among what might be termed the second generation in the ornithological exploration of New Mexico. In his brief autobiographical sketch (Stephens, 1918), at the age of 70 and by then regarded as one of the grand old men of his day, he touched on his visit to our state, he arrived in New Mexico in March 1875, just before his 26th birthday, and passed through Taos, Santa Fe, Albuquerque, and Socorro, en route to Grant County, where he and his wife spent a year collecting birds and making observations. Eventually, the threat of Apaches, to whom Stephens lost his horse, would cause him and his wife to leave from Arizona and, as far as I can determine, he never returned to do bird work in New Mexico.

Stephens (1918) writes of his interests in natural history, beginning in his boyhood days in New York, Michigan, and Illinois. Actually, his boyhood was short, and he dropped out of school altogether, after several years of increasingly spotty attendance, at the age of 16. By the time he was 15 he was already pressed into extended labor in the fields, as the Civil War took the men away from the farms to a large extent. Stephens nevertheless was an avid reader on subjects of interest, but he admits that volumes on natural history were few and far between. His first efforts at preparing birds as specimens were in taxidermy lessons in Illinois in 1871, when he was 22. That introduction to what would become part of his trade was not very satisfactory, judging from his autobiographical notes.

Stephens (1918) moved to Kansas with his new wife in 1873, and then to Colorado Springs, Colorado, where he met Charles B. Aiken, a young

ornithologist. Among other things, Aiken taught Stephens how to prepare scientific study specimens, as Aiken recognized the promise in the under-educated farmer. We can thank him for getting Frank Stephens on the path to what proved a productive career in biology.

In the spring of 1875, Stephens and his wife left on the expedition to the Southwest, with the understanding that Aiken would purchase the specimens that Stephens hoped to procure in Arizona and New Mexico. Stephens did succeed in his endeavor to collect specimens, the bulk of which are at the University of Colorado (Aiken collection) and the San Diego Museum of Natural History. Others are in the California Academy of Science, the Academy of Natural Sciences of Philadelphia, the Museum of Comparative Zoology at Harvard, and the American Museum of Natural History.

To date I have records of two egg sets and 230 skins of 96 species taken by Stephens in New Mexico in 1875-76, the bulk from Grant County. I suspect that there are some additional specimens that I have not yet recorded, especially involving sets of eggs that Stephens later referred to in print. I have records of 102 skins of 62 species catalogued at the University of Colorado and of 71 skins of 59 species catalogues at San Diego. I have not seen any field notes that Stephens may have compiled during his visit to New Mexico, but these may exist.

Judging from specimen data, Stephens' itinerary was as follows: 1875: 21-30 April, Taos area; 3-9 May, Santa Fe area; 10 May, Albuquerque; 15-17 May, Rio Grande at its junction with the Rio Puerco; 20-23 May, near Socorro, including Ft. Craig; 28 May, Palomas; 4 June, Silver City; 18 June, Burro Mts.; 28 July-29 December, Ft. Bayard. 1876: 2 January-6 February, Ft. Bayard; 11 February, Gila River near the present town of Cliff (Old Ft. West); 13 February, Silver City; 15 February-9 March, Ft. Bayard; 7-11 April, Mimbres River; 13 April-24 May, Ft. Bayard; 26 May-17 June, Gila River, at least part of the time near the present town of Virden (see Stevens [sic], 1879); 19 June, Silver City; 25 June-20 July, Ft. Bayard; and 2-9 August, Ft. Bayard.

Ft. Bayard as Stephens knew it appears not to have differed materially from the present version, based on the survey and descriptions of the time (U. S. Army, 1876). The reservation was established in April 1869 and consisted of almost 16 square miles. The Fort proper lay about 10 miles east of Silver City, 10 miles southeast of Pinos Altos, and 12 miles west of the Mimbres River. Vegetation was said to consist of pine, 'cedar,' and oak, with good crops raised in the stream bottoms and good grazing nearby. Stephens (1918) wrote that he lived on an "exposed mountain ranch," which could, of course, have been anywhere in the vicinity of Ft. Bayard. Judging from the frequency and number of specimens labeled "Ft. Bayard" and the fact that Stephens distinguished such nearby areas as Silver City and the Mimbres River, I suspect that he may actually have lived on the reservation, perhaps north of the fort itself.

Stephens' contributions to the ornithology of New Mexico were significant, in spite of the relatively small size of the collection and the meager published records that resulted. Following Henry in the 1850's and Henshaw in 1874, Stephens' ornithological foray to the southwestern part of the state carried on the scientific study of the birdlife of the Silver City area that continues there today. Without Stephens and such successors as Marsh in the 1880's and R. T. Kellogg over several decades beginning in 1912, our appreciation of the birdlife of that area would be the poorer. Stephens personally published only three notes on his visit, one (Stevens [sic], 1878)

briefly dealing with 20 species, another (Stevens [sic], 1879) on the nesting of Zone-tailed Hawk (*Buteo albonotatus*) on the Gila River, and a third (Stephens, 1902) on Lawrence's Goldfinch (*Spinus lawrencei*). Stephens also touched on the results of his New Mexico expedition through data supplied to Brewster (1882, 1883) and to Bendire (1892, 1895). In assessing Stephens' contributions, it is worth remembering that he worked in New Mexico during very difficult times, what with hostile Indians, lack of facilities including references sources, and so on. In the face of these problems, the contributions of Stephens and others assume considerably greater proportions than they might if made now, 100 years later.

Rather than list all of the specimens and other data gathered by Stephens, I would like to discuss only the more significant species, including some that apparently were not encountered by him in southwestern New Mexico.

ducks: none was collected or mentioned by Stephens, which may reflect a relative rarity in the area of this group of birds; other waterbirds are also rare in his collection.

Gray Hawk (*Buteo nitidus*): two sets of eggs purported of this species, collected at Ft. Bayard on 23 April 1876, may actually be those of Cooper's Hawk (*Accipiter cooperii*) according to Hubbard (1974a, 1974b), but see Zimmerman (1976) for arguments regarding this reassessment.

Aplomado Falcon (*Falco femoralis*): Stephens took 2 specimens on or near Ft. Bayard of this now rare-in-New Mexico species, a male on 28 July and a female on 8 August 1875. These are the northernmost verified records west of the Rio Grande in New Mexico and the only ones in the close proximity of Silver City.

Costa's Hummingbird (*Calypte costae*): Stephens reported (in Bendire 1895:203) that he had encountered a male at a nest near Old Fort West in [late] May 1876, this the first record of this species in New Mexico. There is room for doubt concerning the accuracy of this record, including for the reason that male hummingbirds generally do not visit the nest. Elsewhere, Stephens (Stevens [sic], 1879) indicated that in late May 1876 he was "about 20 miles above the Arizona line" on the Gila, which is some 30 river miles below Old Fort West. It seems unlikely, in terms of the distance and terrain, that Stephens was actually in both areas in late May, and he may have misremembered the site of his observation by the time he communicated with Bendire.

Gila Woodpecker (*Centurus uropygialis*): Stephens did not find this species on the Gila River in New Mexico (Brewster, 1883:24), where it is now resident. The absence on the Gila of nineteenth century records of this and such species as Lucy's Warbler (*Vermivora luciae*) and Cardinal (*Cardinalis cardinalis*) suggests they are rather recent occupants of the area, as pointed out by Phillips (1968) and others.

Wied's Crested Flycatcher (*Myiarchus tyrannulus*): Stephens (Stevens [sic], 1878) reported taking a specimen of *M. crinitus*, the eastern Great Crested Flycatcher, on the Gila River on 12 June 1876, but the bird is clearly this species. It is little wonder at the misidentification, as the two birds are similar, and Stephens probably had insufficient background and references to distinguish *tyrannulus*. Brewster (1882:203) corrected the identification, based on his comparison of the specimen with the appropriate species.

Buff-breasted Flycatcher (*Empidonax fulvifrons*): Stephens encountered this species rather commonly (Brewster, 1882:207), and he took seven at Ft. Bayard in August 1875 and April, June, and July 1876, plus one in the Burro Mts. in June 1875. The species is now quite rare in New Mexico.

Coues Flycatcher (*Contopus pertinax*): Stephens took the first state specimen at Ft. Bayard on 16 July 1876. The bird is local and rather rare in the area now.

Common Crow (*Corvus brachyrhynchos*): Stephens encountered a flock of this species and took a specimen 11 April 1876 on the Mimbres River, where the species has apparently not subsequently been recorded.

Mexican Jay (*Aphelocoma ultramarina*): Stephens appears to have been the first to verify this as an occupant of the Mogollon Plateau in New Mexico, along with such other Sierra Madrean species as Bridled Titmouse (*Parus wollweberi*), Red-faced Warbler (*Cardellina rubifrons*), and Painted Redstart (*Myioborus pictus*).

Hutton's Vireo (*Vireo huttoni*): Stephens was the first to find this species in New Mexico, and later the population of the Southwest was named *stephensi* in his honor (Brewster, 1882:142). He also collected Bell's (*V. bellii*) and Gray (*V. vicinior*) Vireos in New Mexico, both on the Gila River.

Blackburnian Warbler (*Dendroica fusca*): Stephens (Stevens [sic], 1878) reported taking a female at Ft. Bayard in May 1876, but I can find no such specimen. The possibility exists that Stephens erred in his identification, as he may have been unfamiliar with females of such species as Townsend's Warbler (*D. townsendi*), which resembles *fusca*.

Hooded Oriole (*Icterus cucullatus*): Stephens took an adult male on the Gila River on 10 June and a juvenile on 5 June 1876, for the first records for the state. This provides evidence that this species has a long historic record of occurrence in the state, although farther west some areas have been occupied only recently (Phillips, 1968). Abert's Towhee (*Pipilo aberti*) was also recorded, again pointed to extended occupancy of the Gila Valley in historic times.

Lawrence's Goldfinch (*Spinus lawrenci*): Stephens encountered this species at Ft. Bayard on 20 January 1876 and took a male and female for the first New Mexico records of this species (Stephens, 1902).

I wish to acknowledge the help of several people in gathering information on Frank Stephens and his collections, including Dean Amadon, Richard Banks, Laurence Binford, James Bond, William Burt, Lloyd Kiff, Roxie Laybourne, David Niles, and Allan R. Phillips.

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#### CAUFORNIA CONDOR SHOT

##### From the Audubon Leader of the National Audubon Society

There are probably less than 50 California Condors left in the world and one of them was shot last month [September] . The bird, which is still alive, was hit by a hollow-nosed bullet which shattered its wing, and it was not until some two weeks later that a party of hunters in Kern County [California] found it on a mountainside and promptly reported it to authorities. National Audubon Condor Naturalist John C. Borneman and others took it to the Los Angeles Zoo health center. The bird was badly emaciated and infection had set in; so far it has responded to treatment and is regaining its weight, but doctors doubt that they will be able to save the wing.

[In California as well as New Mexico all raptors, including vultures, are protected by law. The fact that the Condor is perhaps the rarest bird in North America, and federally protected, makes this a particularly sad incident. Hopefully, organizations such as the NMOS can bring about the kind of change in public attitudes that will prevent this sort of thing in the future.]

#### FORUM ON PHREATOPHYTE CONTROL

By Brian Locke

The New Mexico Environmental Coordinating Council and the New Mexico State University students' chapter of the Wildlife Society will sponsor a forum on Phreatophyte Control the evening of November 30, 1976, in the College of Agriculture Auditorium (Room 194 Ag. Bldg.) on the NMSU campus, Las Cruces. Professional speakers, including representatives of the U. S. Bureau of Reclamation, the U. S. Bureau of Land Management, the Sierra Club, the New Mexico Native Plant Society, the New Mexico Dept. of Game and Fish, and the NMSU Depts. of Engineering, Fisheries and Wildlife Science, and Biology, will be invited. Along with the audience, they will attempt to bring out all sides of this controversial issue. Members of the NMOS are strongly urged to attend. For more information, please contact Brian Locke, 1305 Plain St., #1, Las Cruces 88001 (phone 523-6252)

### AVIAN BOTULISM OUTBREAK

By Bill Principe

In late August, during a routine inspection, the environmental health officer at Holloman Air Force Base near Alamogordo noticed several dead ducks in the settling lagoons of the Base sewage system. After more of these birds were found, some were sent to U. S. Fish & Wildlife Service labs, where avian botulism was detected in the carcasses. Also known as "western duck sickness," avian botulism can kill thousands of ducks in a major epidemic. The breakout at Holloman has become one of the largest in the southwest in recent years. As of mid-October, some 3000 birds had died. The vast majority of these were Shovelers and Blue-winged/Cinnamon Teal. Also affected in smaller numbers were Ruddy ducks, Pintails, Mallards, Green-winged Teal, White-faced Ibis, and assorted shorebirds, mostly yellowlegs. At least one Mexican Duck had been found among the dead. A handful of birds have been saved, by being injected with botulism antitoxin and transported to clean waters in Las Cruces.

Botulism is caused by a bacteria, *Clostridium*, which is always present in the soil in low numbers. Under anaerobic (low oxygen) conditions, the bacteria "bloom," and thrive in dead vegetation, and later in the carcasses of dead birds. The sewage ponds at Holloman, which accepted untreated sewage from the Base, provided ideal habitat for the bacteria, and it apparently spread through the 500+ acre system of settling lagoons.

Partially in response to this incident, the Air Force is now pursuing plans to upgrade their sewage treatment program. In future years, the Base should supply water clean enough to provide thousands of ducks with safe winter habitat. The largest of these lagoons, and the last in the chain, is 100 acre 'Lake Holloman,' visible from U.S. Highway 70, three miles northeast of the White Sands National Monument Headquarters. The mudflats on either side of the highway, below the dike retaining "Lake Holloman," make excellent habitat for migrating shorebirds, and passage Peregrine Falcons are reported feeding of the birds occasionally.