

ATTACHMENT "F"



Department of
Natural Science

Western New Mexico University

12 July 1997

Subject: Meeting of the Habitat Assessment team for the Southwestern Willow Flycatcher

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Dear Debbie:

Circumstances prevent my attending the meeting in Flagstaff, but I very much appreciate the invitation to attend, and I had hoped to do so. In lieu of my presence, I herewith furnish some detailed comments, illustrated with a few slides, which I hope can be presented at the meeting.

At intervals over the past four decades I have recorded Willow Flycatchers in the Gila River Valley of Grant and Hidalgo counties. My early observations were not particularly directed toward that species, but were made in connection with general bird surveys, hundreds of birding visits and numerous field trips with my ornithology classes (over a 30-year period). During the past few years greater attention has been given to the breeding population (assumed to be *Empidonax traillii extimus*), on the limited occupied areas of the Gila National Forest (often with Paul Boucher), and especially on private property owned by Phelps Dodge Corporation and managed by the U Bar Ranch. The latter has been part of my traditional local birding grounds since 1958. In recent years I have visited this property (as a guest of U Bar manager David Ogilvie) often accompanying my colleague Dr. Roland Shook and/or Mr. Dennis Parker who is specifically monitoring Willow Flycatchers on the U Bar for Phelps Dodge Corporation.

For many years I associated this flycatcher (during breeding season) almost exclusively with riparian shrub willows, the latter sometimes mixed with low trees such as Goodding's willow, young Fremont's cottonwoods and boxelders plus seepwillow shrubs (*Baccharis glutinosa*) or, more locally, alders; but invariably in the immediate vicinity of the Gila River itself or along adjacent backwaters. [See Slide 1]

During the late 80's and early 90's I visited the Gila Valley less frequently, and when there I recorded few flycatchers--reflecting, I assumed, the subspecies' general decline. Consequently, it came as a surprise when I began devoting more time to the Gila during the mid-1990's, to learn from Dennis Parker, and later from my own field observations, that these birds were present in appreciable numbers in habitat that I considered to be atypical for the species. This habitat was of two intergrading sub-types: (1) [Slides 2-4] patches or blocks of tall floodplain forest or woodland dominated by cottonwood and boxelder but mixed with some sycamore, ash, hackberry, mulberry, Russian olive, and occasional tamarisk or honey locust (2) [Slides 5-6] narrow to very narrow corridors or "stringers" of the same woody plant species, though often with Russian Olive as a major component, alongside water diversion ditches amid cattle pastures and former agricultural land [Slide 7].

In both the larger woodland patches and the narrow strips, boxelder is the most frequently used plant species for Willow Flycatcher nest placement. Certain patches with their adjacent radiating "stringers" contain surprisingly high densities of breeding flycatchers. One such plot of ca. six or seven acres (Parker's # 1 SE) has supported between 40 and 50 pairs in each of the past two years. [Slides 8-10]

Although not concentrating on Willow Flycatchers in earlier years, it is unlikely that I would have overlooked them in these habitats, as I often birded along the dikes and ditches and particularly in the wooded areas with their diverse birdlife. I had been birding in many of these same patches of woods, which today support flycatchers, over an appreciable span of years. My hearing was particularly acute, and I was ever alert for *fitz-bew* calls. I consider it equally significant that John Hubbard did not encounter numbers of Willow Flycatchers in these habitats when he surveyed the Gila Valley specifically for this species in the mid-1980's. Dr. Hubbard, one of my former students, has had extensive first-hand experience in the area. He knows these sites as well as I.

Acceptance of the reasonable assumption that two experienced field ornithologists did not overlook large numbers of these birds forces one to seek alternative explanations for the present population figures. It would seem that Willow Flycatcher habitat preferences in this area have changed over the years, and/or that their numbers have significantly increased locally during recent years *despite* the subspecies' apparent continued decline in most or all other portions of its range.

The fact remains that in this portion of the Gila Valley, specifically on U Bar Ranch land, the Willow Flycatcher has become a *fairly common* bird. This year's breeding population exceeds 150 pairs. (Dennis Parker informs me that his final survey last week disclosed 174 pairs.) Interestingly, the limited amount of "traditional" habitat of shrub willow and alder on adjoining Gila National Forest land supports only about a dozen pairs. Scott Stoleson's single survey this summer disclosed no Willow Flycatchers on similar Nature Conservancy property between the National Forest boundary and private land downstream, although a few nested there some years ago. This year, for the first time, three pairs are present in low riparian growth downstream from Bill Evans Lake on the boundary between U Bar Ranch and Gila National Forest land, an area where the Forest Service has been enhancing Willow Flycatcher habitat through plantings and exposing the water table on select sites. [Slides 11-12] Perhaps two dozen pairs or more are present downstream around Redrock, according to Dennis Parker some of them in wooded ditch corridors. Virtually all are on private land not accessible to investigators, so information about these birds is (and doubtless will continue to be) limited. Flycatcher habitat near Redrock contains considerably more tamarisk than that upstream in the Cliff-Gila area.

Generally, except near Cliff and Gila, the valley's Willow Flycatchers appear to be composed of small groups of birds, typically only a few pairs, that persist on a site for several years and then often move or disappear. Probably the large population on the U Bar serves as a source from which birds disperse to other sites up and down the valley. The existing habitat there seems far from saturated. If it can be maintained, and if habitat in other portions of the valley can be significantly improved, the outlook for the flycatcher's future in this part of New Mexico would seem encouraging.

Water diversion from streams is a commonly cited threat to Willow Flycatcher habitats, but this does not apply to the Cliff-Gila region of the Gila River Valley. There, recent rehydration of pasture and field ditches, combined with protection of naturally occurring woody vegetation along these ditches, has created a significant portion of the important flycatcher habitat discussed above. In many respects, including general vegetation structure, this ditch-bank habitat resembles natural riparian forest or woodland, although it is typically only one to five

trees (ca. 6-12 m) wide. Conclusions must await analysis of detailed data gathered by Dennis Parker and Scott Stoleson, but my discussions with these investigators and my own observations suggest that at least half of all Willow Flycatchers in the Gila Valley now nest along these water diversion ditches. This year, for example, one ditch [Slides 13-14] about 1.5 miles in length (including several bare expanses with no flycatcher habitat) supports over 20 pairs of this species. Thus the population along only this one ditch may be greater than the total number of Willow Flycatchers breeding in "typical" streamside shrub willow habitat in this entire middle portion of the Gila Valley.

Few of the U-Bar irrigation ditches supported flycatchers 25 or 30 years ago. The present-day type of habitat was then scarce. Land-use practices at that time typically involved active clearing of woody vegetation from the ditch banks. Only in relatively recent years have most of these ditches been rehydrated and allowed to develop sufficient tree growth to attract breeding flycatchers. Today, these form a network of wooded strips connecting many of the floodplain woodlots with one another and with the often extensive fringe of true riparian habitats along the river itself. [Slide 15] These together form a mosaic of considerable overall acreage that occupies a significant portion of the valley in the Cliff-Gila area. The importance of this extensive habitat lies not only in its size but also in its continuity which permits free movement of Willow Flycatchers throughout. This doubtless facilitates genetic mixing of local populations, and it allows for easy movement of birds into additional habitat whenever required. The extent of this valley woodland mosaic may be important for post-breeding dispersal prior to autumn migration.

Cattle grazing has been almost universally viewed as a threat to the habitat of breeding Willow Flycatchers, and studies from some other regions support this view. However, as with water diversion regimes, a distinction must be made between properly managed grazing programs, such as that on the U Bar Ranch, and environmentally unsound practices which exist elsewhere in the Southwest. *Moderate numbers of cattle can and do co-exist with a large, healthy and increasing population of breeding Willow Flycatchers* in the Gila Valley. On the U Bar, grazing is a prominent activity. Under present management, overgrazing has been largely eliminated, the riparian woods are in good to excellent condition (with impressive reproduction of important plant species), and the impact of cattle on flycatcher habitats appears to be negligible. In essence, Willow Flycatchers are thriving. We have here the largest and healthiest of all known populations of the subspecies, with cattle all around them.

Incidentally, although occasional animals may enter any of the nesting plots, high nest placement (see below) virtually precludes direct damage to Willow Flycatcher nests by cattle on the U Bar Ranch.

Although this meeting is primarily concerned with habitats, mention of livestock leads to consideration of Brown-headed Cowbirds, another commonly cited threat to Willow Flycatchers. Undoubtedly important in impacting some flycatcher populations, cowbirds appear to be of little or no significance in the Gila Valley, at least north of Redrock. My observations, like those of Roland Shook and Dennis Parker, show cowbirds to be widespread but nowhere abundant during the breeding season. I have seen no evidence of serious parasitism.

Scott Stoleson informs me that of some 40 Willow Flycatcher nests he has seen this year, only two or three were parasitized, and as of the present date no young cowbirds are known to have fledged from flycatcher nests. Dennis Parker's studies from 1994 through 1997 also show a very low rate of parasitism--this despite an active, ongoing cattle operation throughout the flycatcher's range within the valley.

Although few flycatcher nests are parasitized, local parasitism of certain other passerines (e.g. Yellow Warbler, Yellow-breasted Chat) is moderately heavy. I suspect that in a generally

healthy habitat supporting a high number of bird species, cowbird parasitism is spread out among so many other hosts as to be of negligible importance to Willow Flycatchers. Although obviously not *typical* Willow Flycatcher habitat, that on the U Bar Ranch may prove to be *optimal* habitat for the species. The parasitism situation here probably differs greatly from that in a fragmented and deteriorating habitat with lower bird numbers and species diversity.

With reference to cattle, cowbird expert Stephen Rothstein points out that if parasitism rates are low there may be no justification for grazing restrictions. This supports my view that unless cowbird and cattle numbers are excessive, Willow Flycatchers can do very well providing no other negative factors exist.

Nest placement is of interest and may be significant. Most Willow Flycatcher nests on the U Bar Ranch are four to five meters or higher above ground. I have seen a dozen or more as high as 10 m, [Slide 16] and two between 15 and 18 m. For various riparian bird species in Iowa, the percentage of nests successfully fledging young increased significantly with nest height (see Best and Stauffer, *Condor* 1980). Whether or not nest height itself is important for Willow Flycatchers, I suspect that those nesting in floodplain forests and wooded corridors are less likely to be parasitized than those in low streamside willows. Although many wooded tracts in the Gila Valley are narrow, these may be less rewarding to nest-seeking female cowbirds than nearby shrubby or open areas.

In summary, the thrust of my comments is to caution against assuming that threats to the southwestern race of Willow Flycatcher are necessarily the same throughout its range. If I have learned anything in the past few years of observation along the Gila it is that automatic condemnation of such practices as "grazing" or "water diversion" *per se* is unwarranted. Yet, without any modifiers or qualifying statements, virtually every Willow Flycatcher paper, report, or agency briefing perfunctorily brands these practices as avowed detriments to flycatcher habitat--much to the frustration and concern of *responsible* land stewards such as those on the U Bar. As biologists we would do well to temper our preconceived judgement of all factors and carefully analyze the circumstances that have permitted development of a large and thriving population of Willow Flycatchers in the midst of a working cattle ranch.

Indeed, this is by far the largest and most productive population of the subspecies known, but without the current prudent management of Phelps Dodge lands in the Gila Valley, southwestern New Mexico's Willow Flycatchers might well be sharing the plight of those in California and Arizona. With the vast majority of our flycatchers on private properties, any management plans must actively promote genuine cooperation and mutual trust between agencies and landowners if we expect the birds to prosper.

Sincerely,



Dale A. Zimmerman Ph.D.
Professor Emeritus