



Notes on the Birds of Central Oaxaca, Part I: Podicipedidae to Laridae

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Summary

New data are presented amplifying or clarifying the status and distribution of 67 species of birds found in Central Oaxaca, Mexico, in portions of the Districts of Centro, ETLA, Ixtlan, Tlacolula, and Zaachila within 35 km of Oaxaca City. Summaries are based on observations made on 728 days during the period from Dec 1996 to Dec 2001. Principal habitats found in the area are pine-oak (including limited areas of pine-oak-fir and limited extensions of bunch grass mixed with pine-oak), oak scrub, arid subtropical scrub, riparian areas, and areas modified for agricultural or other human use (including urban areas, gardens, and parks). The following species are newly reported from the area as vagrants or rare transient migrants: American White Pelican (*Pelecanus erythrorhynchos*), Tricolored Heron (*Egretta tricolor*), White Ibis (*Eudocimus albus*), Black-bellied Whistling-Duck (*Dendrocygna autumnalis*), Fulvous Whistling-Duck (*Dendrocygna bicolor*), Purple Gallinule (*Porphyryula martinica*), Semipalmated Plover (*Charadrius semipalmatus*), American Avocet (*Recurvirostra americana*), Northern Jacana (*Jacana spinosa*), Semipalmated Sandpiper (*Calidris pusilla*), Western Sandpiper (*Calidris mauri*), Red-necked Phalarope (*Phalaropus lobatus*), and Forster's Tern (*Sterna forsteri*). Also, the following four species are newly recorded as breeding in the area: Least Grebe (*Tachybaptus dominicus*), White-tailed Kite (*Elanus leucurus*), West Mexican Chachalaca (*Ortalis poliocephala*), and Common Moorhen (*Gallinula chloropus*).

Key Words: Oaxaca birds.

Resumen

Notas sobre las aves de Oaxaca central, parte I: Podicipedidae a Laridae

Se reportan nuevos datos que amplían y clarifican nuestro conocimiento del estatus y distribución de 67 especies de aves en la región central del Estado de Oaxaca. Las observaciones se realizaron abarcando partes de los distritos de ETLA, Ixtlan, Tlacolula, y Zaachila dentro de un círculo de 35 km alrededor de la Ciudad de Oaxaca. El reporte se basa en observaciones tomadas durante 728 días, comprendidos entre diciembre 1996 y diciembre 2001. Los hábitats principalmente visitados fueron pino-encino (incluyendo zonas pequeñas de pino-encino-oyamel y pino-encino mezclado con pastizales), matorral de encino, matorral subtropical, vegetación riparia, y vegetación secundaria, campos agrícolas y otros (incluyendo áreas urbanas, jardines, y parques). Las siguientes especies se reportan por primera vez en la zona: *Pelecanus erythrorhynchos*, *Egretta tricolor*, *Eudocimus albus*, *Dendrocygna autumnalis*, *Dendrocygna bicolor*, *Porphyryula martinica*, *Charadrius semipalmatus*, *Recurvirostra americana*, *Jacana spinosa*, *Calidris pusilla*, *Calidris mauri*, *Phalaropus lobatus* y *Sterna forsteri*. Las siguientes cuatro especies se reportan por primera vez como residentes en apareamiento en el área: *Tachybaptus dominicus*, *Elanus leucurus*, *Ortalis poliocephala* y *Gallinula chloropus*.

Palabras clave: Aves de Oaxaca.

Résumé

Espèces d'oiseaux dans la région centrale de l'état d'Oaxaca I: Podicipedidae-Laridae

Cet article presente de nouvelles dones que augmentent et claréfient notre connaissance du statut et de la distribution pour 67 espèces d'oiseaux dans la région centrale de l'état d'Oaxaca. Les observations furent realises en partie sur les districts d'ETLA, Ixtlan, Tlacolula et Zaachila, dans un cercle de 35 km du rayon autour d'Oaxaca de Juárez. Cet article se base sur 728 jours d'observation entre décembre 1996 et décembre 2001. Les principaux habitats sont de forêts mixtes de pins-chênes (incluant des zones restreintes de pins, chênes et arbres d'Abbies et pins chênes avec parties ouvertes herbacées), buisson de chênes, buisson sub-tropical, végétation riparienne et végétation segondaire, zones agricoles, y autres (incluant zones urbaines, jardins et parcs). Les espèses suivantes sont mentionnés pour la première fois dans cette partie d'Oaxaca: *Pelecanus erythrorhynchos*, *Egretta tricolor*, *Eudocimus albus*, *Dendrocygna autumnalis*, *Dendrocygna bicolor*, *Porphyryula martinica*, *Charadrius semipalmatus*, *Recurvirostra americana*, *Jacana spinosa*, *Calidris pusilla*, *Calidris mauri*, *Phalaropus lobatus* y *Sterna forsteri*. Les quatres espèces suivantes sont observées pour la première fois comme résidents en couple dans cette partie d'oaxaca: *Tachybaptus dominicus*, *Elanus leucurus*, *Ortalis poliocephala* y *Gallinula chloropus*.

Mots clés: Oiseaux d'Oaxaca central.

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Accurate information on the distribution, breeding, and movements of birds serves as a basis for their sound management. For many Mexican birds these parameters are known in only the most general way or not at all. Ongoing breeding bird studies, for example, are lacking for most species. In central Oaxaca, the Christmas Bird Counts begun in 1996 have been the only effort to record species consistently over a number of years, aside from my own studies.

Binford's excellent statewide study (Binford 1989) continues to be the basic resource book on Oaxacan birds, but the need for more and current information is indicated by the number of species that he lists as known from single specimens only, some collected in the nineteenth century, and by the lack of breeding information even for many well-known species.

Subsequent to the publication of Binford's work, a number of shorter articles and notes have been published that report partially or wholly on Oaxacan birds (Parkes 1990; Winker et al. 1992; Erickson and Hamilton 1993; Roberson and Carratello 1997; Schaldach et al. 1997; Gómez de Silva 1998; Hunn et al. 2001). Of these, only Shaldach et al. (1997) and Hunn et al. (2001) report results from field work carried on over several years. Though some authors have commented that the birds of central Oaxaca are well known, Erickson and Hamilton (1993) reported new information on 12 species based on just six days of birding in the area.

Howell and Webb's (1995) field guide to Mexican birds covers the entire avifauna of Mexico and provides another excellent resource for the birds of Oaxaca. The authors state that their range maps often had to be interpolated where information was lacking, and thus their assessments of the occurrence of various species in central Oaxaca may be based on observations from Mexico as a whole. Howell's later work (Howell 1999), in which he reports on the results of 13 visits to the central Oaxaca area over 13 years, provides lists of species for some sites in the area that include some interesting observations, without dates or other specifics.

The following report presents information gleaned from five years of observation of birds in central Oaxaca. For the species listed, I have included information that supplements or clarifies information provided by previous authors. In a number of cases I report information that amplifies aspects of the breeding cycle, local movements, etc. Much remains to be learned about the avifauna of this region.

Methods

This report focuses primarily on an area that can be circumscribed by a circle with radius of approximately 35 km centered in Oaxaca City. Sites visited included portions of the Districts of Centro, ETLA, Tlacolula, Ixtlan and Zaachila. The area includes highland areas to about 3200 m elevation to the north and northeast of Oaxaca City. At these highest areas, one passes the continental divide, entering slightly into areas that drain north to the Gulf of Mexico, while the majority of the area drains to the

Rio Atoyac and ultimately south into the Pacific Ocean. Lowest elevations are at 1500 m along the Rio Atoyac just south of Oaxaca City. Additionally, records will be mentioned for a few species in the Sierra Juárez north of the principal area of study.

Principal habitat divisions found in the area are pine-oak forest, relatively continuous scrub habitats of the lower slopes, and heavily modified scrub habitats mixed with agricultural areas in the valleys. Pine-oak in turn can be divided into humid and dry pine-oak forests, the former including large extensions of pine-oak-fir found at the highest elevations along the La Cumbre-Llano Grande axis north and northwest of Oaxaca City. The San Pablo Cuatro Venados area southwest of Oaxaca City supports a high elevation pine-oak forest mixed with extensive areas of bunch grass either as an understory or completely replacing arborescent vegetation. Scrub habitats are readily divided into oak scrub and arid subtropical scrub. The latter type in lower elevation areas has been modified repeatedly for centuries, forming the extensive mosaic of disturbed areas found in the valleys. Disturbed areas also include towns and the greater urban area comprising Oaxaca City and adjoining communities. Within the latter and its adjoining areas are limited areas of non-native park vegetation characterized by taller trees that seem to be particularly attractive as nesting sites for some species of birds. Riparian areas are found along the major streams flowing into the valleys and along the rivers, although in the latter areas they have been extensively destroyed for agricultural purposes. Many seasonally dry arroyos support a more or less impoverished riparian vegetation which is still taller than surrounding scrub. Man-made aquatic habitats (e.g. ponds and dams) are mostly found below 1700 m.

My observations have been made using an opportunistic approach. Basic data recorded for each species-observation were date, numbers per observation, and location. Additional notes were taken, especially relating to breeding behavior of various kinds. I have recorded observations of birds on 728 days during the five year period from Dec 1996 to Dec 2001. Cumulative number of field days per calendar month varies from 46 to 85. Time spent in the field on each day varied from one to ten hours, but a conservative average would be three hours per day of actual field time exclusive of travel, etc., thus a total time in the field of about 2184 hours. I have almost always been in the field at least once a week, sometimes daily for fairly extended periods. Although I have made some effort to distribute my time throughout the various habitats, elevations, and geographic areas, I have spent more time proportionately in lower elevation areas than in higher.

New information of the following kinds is reported for the listed species: species previously unreported for the area; new dates for migrants; clarification of status, distribution, and habitat; additional information on breeding, including species newly reported breeding here and new information on breeding seasons; seasonal movements.



For each species, following the Latin name and English common name from American Ornithologist's Union (1998), I usually give the number of my observations in brackets. This is omitted when there is only one or no observation as the basis for my report. For purposes of counting, one observation is a record of a species at a geographic locality on a given date, regardless of numbers observed. Counts of vocalizations were used, but only for fairly easily recognizable vocalizations.

Following the number of observations, I summarize my observed elevations for the species expressed in meters above sea level, often expressed as a maximum or minimum figure. Elevations have been read as closely as possible from INEGI topographic maps, 1:50000 scale. For purposes of comparisons, in some cases I have converted Binford's (1989) elevations, which he reported in feet, to the nearest meter.

There follows my observed dates for migratory species, usually expressed as a summary over the whole period. However, when only one or two observations serve as the basis for my report, the full date with year is given. This is usually followed by a brief description of habitat or habitats where the species is found.

A second and subsequent paragraphs summarizes my own observations, often expressed as confirming or differing from previous authors findings. In this portion, I summarize specific aspects for which new information is available, such as distribution, status, breeding information, seasonal movement, etc.

As planned, the present article is the first of three that will cover the species over which I will report. This list is not intended to be a complete list of species found in the area. Although I have recorded many other species in the area, my data do not provide any new information of note for those not included.

The term "interior" is used as defined in Binford. Terms such as "this area", "our area" and "here" mean the area of focus as defined above under methods, and where I describe my own data from outside that area, it is specifically stated as such. Also, it should be understood that where I state that a certain species was unreported by a previous author, this means unreported in this area, even though the author may have reported it elsewhere in Oaxaca. PAD is used for the Piedra Azul Dam near Teotitlán del Valle.

Results

PODICIPEDIDAE

Tachybaptus dominicus Least Grebe. [174] To 1740 m. At area ponds and dams.

Previously unreported as breeding. I have noted prejuvenile birds Feb 18, Jul 31, and Nov 29 to Dec 13. Larger juvenal plumage birds also noted at various locations Mar 3, Aug 16 and 19, Oct 20, Nov 30, Dec 13, and Feb 22. Likewise, Hector Gómez de Silva (pers. com.) reports seeing two adults with seven juveniles Oct 20, 1997 at the PAD.

The status of this species in central Oaxaca is somewhat precarious due to uncertainty of suitable habitat during dry periods and also manipulations of water levels by man. As smaller ponds dry out during spring, the birds congregate in the favorable areas that remain. For example, between 15 and 20 birds were counted on several visits to the PAD during the early months of 1998. During the extremely dry conditions of April and May of that year, the number rose slowly to a high of 45 on May 22. The numbers dropped slowly once the rains began in Jun, and on Aug 17, when heavy rains created the highest water levels I have seen in the dam, there were only 8 birds recorded, most having apparently moved out to suitable temporary habitat elsewhere. Thus, the species exhibits the opportunistic habitat use demonstrated by it in other parts of its range (Storer 1992).

Podilymbus podiceps Pied-billed Grebe. [33] To 1700 m. Oct 4 to May 16. At area ponds and dams.

Unreported by Binford (1989), but considered a common to fairly common winter resident by Howell and Webb (1995). My data show the species as rare and irregular in our area. The longest continuously present was a single bird at San Andres Huayapan from Feb 24 to May 16, 2000. One to four birds recorded in years when present. Not recorded 1998-99, 2001-02 (to date). In no case do my observations show an individual staying through the winter season. Late date of May 16 considerably later than Howell and Webb's (1995) late date of Mar.

Podiceps nigricollis Eared Grebe. [47] To 1700 m. Oct 17 to Apr 27. At area ponds and dams.

Unreported by Binford (1989). Howell and Webb (1995) report it as uncommon to rare from Nov to Apr, which my data confirm, occasionally present longer.

PELECANIDAE

Pelecanus erythrorhynchos American White Pelican. A single bird observed at pond below San Pablo Etna, 1620 m, Oct 31 to Nov 15, 1998.

Previously unreported here. Rare vagrant or accidental.

PHALACROCORACIDAE

Phalacrocorax brasilianus Neotropic Cormorant. [4] To 1740 m. Sep 1 to Jan 1. At area dams.

Binford (1989) reported a single previous record in our area on May 28, and Gómez de Silva (1998) reported records at area dams on Oct 14, Dec 20 and 24. Howell and Webb's (1995) map shows it absent our area. My records are for one or two birds seen in three different winter seasons. Longest present was Sep 9 to Oct 20. Rare and irregular vagrant, usually fall and winter.

ARDEIDAE

Botaurus lentiginosus American Bittern. No records.

Binford (1989) reported no records, while Howell and Webb (1995) report it as an uncommon to rare winter



resident. Suitable habitat is scarce, but possible at the marshes near Yagul or along the Rio Salado. Hypothetical.

Ixobrychus exilis Least Bittern. No records.

Binford (1989) reported no records, but Howell and Webb (1995) list it as fairly common. Suitable habitat extremely scarce, possible in limited areas along the Rio Salado. Hypothetical.

Ardea herodias Great Blue Heron. [173] To 1740 m. Jul 10 to May 17. At area ponds and dams.

Unreported by Binford (1989). Howell and Webb (1995) report it as fairly common to common, Sep to Apr, over summering widely, which assessment is confirmed by my data, though present somewhat longer than they indicate. Not seen in large numbers, often singly, but consistently found at many aquatic habitat locations. Four summer records from Jul 10 to Aug 4 could be post breeding wanderers from lowland areas of the state. Presumed non-summering birds beginning Sep 17.

Ardea alba Great Egret. [280] To 1740 m. At area ponds, dams, rivers.

Binford (1989) reported only one interior record. Howell and Webb (1995) report it common to fairly common, Aug to Apr, over summering widely, which my data confirm, though present somewhat longer. Fairly common summer records make dates of migration uncertain. Possibly arriving as early as late Jul, and a presumed non-summering bird was present to May 25. Slightly more common than preceding species, with one to three birds commonly together at a given location, up to eleven at prey concentrations. Early fall arrivals could be post breeding wanderers from nearby coastal areas rather than northern migrants.

Egretta thula Snowy Egret. [206] To 1740 m. At area ponds, dams, rivers.

Unreported by Binford (1989). Howell and Webb (1995) report it common to fairly common, Aug to Apr, over summering widely, which my data confirm, though present somewhat longer. Likely to be seen in greater numbers than preceding species, to 40 birds at concentrations of prey. Summer records make dates of migration uncertain, appear to be Aug 1 to May 19. Early arriving birds in fall could be post breeding wanderers from nearby lowland areas.

Egretta caerulea Little Blue Heron. [53] To 1740 m. Jul 31 to May 11. At area ponds, dams, rivers.

Unreported by Binford (1989), and mapped as a transient migrant by Howell and Webb (1995). Two to seven individuals are recorded each season. Some records are for quite short periods of time, but the longest, from Oct 30, 1998 to Mar 26, 1999, would seem to indicate occasional winter residency. The species is an uncommon transient migrant and rare wintering bird in our area.

Egretta tricolor Tricolored Heron. [15] To 1680 m. Sep 15 to Jan 6. At area ponds, dams, and rivers.

Previously unreported here. Recorded in three winter seasons. Maximum two birds per season. The species is a rare and irregular transient or vagrant.

Egretta rufescens Reddish Egret. [2] To 1620 m. Aug 29, 1998 and Oct 28, 1998. At area ponds.

Unreported by Binford (1989). A single vagrant record reported by Howell and Webb (1995), which status is confirmed by my data.

Bubulcus ibis Cattle Egret. [248] To 1900 m. Aug 5 to Jun 1. Widespread in agricultural areas to lower slopes of mountains.

Binford (1989) did not define the status of this species in our area. Howell and Webb (1995) indicate it as a permanent resident but with a migratory population wintering from Sep to Apr. Seen singly or in groups ranging up to several hundreds at communal roosting sites. Usually arrives considerably later than the Aug date listed above, Sep 15 to Oct 21 in most years. My records show the species to be entirely migratory. Short period of absence may indicate both long-distance and short-distance migratory populations.

Butorides virescens Green Heron. [74] To 1740 m. Aug 19 to May 17. At area ponds, dams, rivers.

Unreported by Binford (1989). Howell and Webb (1995) report it common to fairly common, Sep to May, which my data generally confirm. Usually seen singly, but up to three at a given location. In two of three years when I could record arrivals, the early date was in Sep.

Nycticorax nycticorax Black-crowned Night-Heron. [2] 1580 m. Dec 28, 2000 and Jul 28, 2001. Both along Rio Salado near bridge crossing to San Juan Guelavía.

Unreported by Binford (1989). Howell and Webb (1995) report it as common to fairly common in winter. Both sightings were immature birds. The species is rare in central Oaxaca, probably due to scarcity of suitable habitat, although possibly to lack of coverage of the little habitat that there is. Jul date is curious, possibly represents an early wanderer from breeding populations in lowlands of state.

THRESKIORNITHIDAE

Eudocimus albus White Ibis. A single immature bird Jun 24 to Jul 18, 1998 at San Pablo Etla pond, 1620 m.

Previously unreported here. Rare vagrant.

Plegadis chihi White-faced Ibis. [3] To 1620 m. Dec 12 to Feb 19. At area ponds, rivers.

Unreported by Binford (1989). Howell and Webb's (1995) map shows it present our area, but text seems to describe a coastal distribution south of central volcanic belt. M. Grosselet (pers. com.) reported flocks of 35 and 38 birds in the winter of 2000-01. I saw a single



bird at San Pablo Etla in winter of 1998. Best considered as vagrant, irregularly present in small flocks.

ANATIDAE

Dendrocygna autumnalis Black-bellied Whistling-Duck. [3] To 1650 m. May 24 to Jun 21. At area ponds and dams.

Previously unreported here. One or two birds at each observation. While the behavior of all of these birds indicated that they were wild birds, one observation was of birds flying from the vicinity of a cage containing captives of this species, throwing into some question the status of the species here. Assuming these observations have been of wild birds, they constitute the first such records for the area.

Dendrocygna bicolor Fulvous Whistling-Duck. M. Grosselet (pers. com.) reported one of these birds at the small dam just east of Teotitlan del Valle (1680 m) on Dec 24, 2000, where present to Dec 28.

Previously unreported here. Rare vagrant.

Anas strepera Gadwall. No records.

Unreported by Binford (1989), but mapped as an uncommon winter resident by Howell and Webb (1995). Area habitat used by other ducks should be suitable for this species if present. Hypothetical.

Anas americana American Wigeon. [5] To 1700 m. Oct 18 to May 4. At area ponds and dams.

Unreported by Binford (1989), as common to fairly common during winter by Howell and Webb (1995). All records are of transient birds; none in 1998-99. Rare to very uncommon transient migrant in central Oaxaca.

Anas platyrhynchos diazi Mexican Duck. A single bird present at the PAD (1700 m) from Mar 30 to Apr 25, 2001 (Grosselet and Forcey pers.obs.).

Anas discors Blue-winged Teal. [121] To 1700 m. Sep 11 (M. Grosselet, pers. com.) to May 9. At area ponds and dams.

Unreported by Binford (1989). Howell and Webb (1995) report it common to fairly common, Sep to May, which assessment is confirmed by my data. The only anatid that can be considered regularly common in central Oaxaca, but numbers of birds present vary fairly widely from year to year. By late Feb birds are entering breeding plumage and forming pairs. In late Mar breeding displays are noted.

Anas cyanoptera Cinnamon Teal. [12] To 1680 m. Dec 20 to Apr 10. At area ponds and dams.

Regarded as hypothetical by Binford (1989) but as an uncommon to rare winter resident by Howell and Webb (1995). Recorded two winter seasons. Dec 20 to Apr 4, 1998 and Dec 31, 2000. The species is a rare and irregular transient in winter in our area.

Anas clypeata Northern Shoveler. [11] To 1700 m. Oct 16 to Mar 14. At area ponds and dams.

Unreported by Binford (1989) while Howell and Webb (1995) report it as a common to fairly common transient and winter resident. Of the 11 records mentioned, eight are from the winter of 1997-98, with one from 1999-00 and two from 2000-01. There were no records in the winters of 1996-97 and 1998-99. My data indicate the species is a rare and irregular winter resident, in many years occurring as a transient migrant only.

Anas acuta Northern Pintail. One record Jan 13, 2000, at the small dam just east of Teotitlan del Valle, 1680 m.

Unreported by Binford (1989), while Howell and Webb (1995) report it as a common to fairly common transient and winter resident. The species is rare in our area.

Anas crecca Green-winged Teal. [17] To 1700 m. Oct 26 to Mar 13. Recorded at the PAD and the smaller dam east of Teotitlan.

Unreported by Binford (1989) and considered an uncommon to rare winter visitor by Howell and Webb (1995). Usually present only for short periods, up to three weeks. Once recorded from Dec 13 to Mar 13 at PAD. The species is an irregular winter resident in the area, more commonly appearing in any year as a transient migrant.

Aythya affinis Lesser Scaup. [17] To 1700 m. Jul 28, Nov 4 to Mar 23. At area ponds and dams.

Unreported by Binford (1989). Howell and Webb (1995) report it as a common to fairly common winter visitor, Oct to Apr. Recorded at least once in each of five winter seasons. The longest continuous record was from Dec 5, 1998 to Feb 20, 1999. Other years show single records or up to three weeks in one location. A maximum of three birds have been seen together in one location. The Jul 28 record is extremely early; no notable storms preceded this early arrival, and possibly it represents one of the over summering birds mentioned by Howell and Webb (1995). The species is irregular and rare in winter, occurring only as a transient migrant in most years.

Oxyura jamaicensis Ruddy Duck. [48] To 1700 m. Aug 18, Oct 12 to May 9. At area ponds and dams.

Unreported by Binford (1989). Howell and Webb (1995) list it as common to fairly common, Oct to Apr. A single female was at the small dam east of Teotitlan on Aug 18 and 22, 2000. Recorded numbers indicate a fair amount of movement into and out of the area during some winter seasons. The species was not recorded during the winter of 1996-97, and only one bird in the winter of 1998-99. The species is of irregular occurrence in central Oaxaca, being fairly common to common in most years, rare in others during winter, present later than indicated by Howell and Webb (1995).



ACCIPITRIDAE

Pandion haliaetus Osprey. [14] To 1900 m. Sep 13 to Apr 27. At area ponds and dams, also widespread in valley areas during migration.

Unreported by Binford (1989). Howell and Webb (1995) report it as a transient migrant in interior Mexico. Eight of my observations were recorded during the fall migration period of Sep and Oct, four during the spring migration. Three Dec records from two winters. Though primarily a transient migrant, the species is also a rare winter vagrant, occasionally resident in winter for some extended periods of time.

Elanus leucurus White-tailed Kite. [102] To 1750 m. Seen mostly over savannah-type valley vegetation, also arid subtropical scrub mixed with agricultural areas.

Previously unreported as breeding. The following observations indicate breeding in the area: adult birds harassing red-tailed hawks Jan 20 and Mar 21; adult bird carrying a long, dried grass stem Mar 21; two juveniles attended by an adult bird Apr 20; pair of adults briefly copulating in the top of a tall tree Apr 23. Indications are of a breeding season beginning quite early in the year, possibly in Feb, which is similar to that known for the species elsewhere in its range (Dunk 1995).

Asturina nitida Gray Hawk. [12] Oct 12 to Apr 25. All of my observations are from the vicinity of the bridge crossing the Rio Salado on the road to San Juan Guelavía (1580 m), an area of arid subtropical scrub mixed with small agricultural openings. There are also reports from the Christmas Bird Count of 1996 and M. Grosselet (pers. com.) along the same river from just east of Oaxaca City to Tlacolula de Matamoros.

Unreported by previous authors. All observations but three have been of juvenal plumage birds. Status unclear. Howell and Webb (1995) indicate most populations are resident, but Binford (1989) states that Oaxacan populations are augmented during winter by migratory birds from farther north. Dates suggest our birds are northern migrants.

Parabuteo unicinctus Harris's Hawk. [6] To 1850 m. All six records from San Juan Guelavía to Tlacolula de Matamoros along the Rio Salado in arid subtropical scrub mixed with small agricultural openings. I have also noted less than certain observations at the Yagul archaeological site and above Teotitlan del Valle, also in arid subtropical scrub. Hector Gómez de Silva (pers. com.) has observed the species at Monte Albán and at San Andrés Huayapan.

Binford (1989) reports it as a permanent resident in "lower reaches" of the Oaxaca Valley. Presumably this includes our area, but the phrase could mean the southern portions of the Rio Atoyac Valley. Howell and Webb (1995) map it as an uncommon to rare and local permanent resident in a fairly narrow band through central Oaxaca that includes our area. Apparently no authors indicate that this species is migratory, but it is unrecorded here from Apr 12 to Jul 27. On Jul 28, 2001 a pair of adult birds were

seen soaring and interacting together just west of Tlacolula. This is the only observation of possible breeding behavior in our area. Status unclear. The gap covering most of Apr through Jul presumably would correspond at least roughly to the breeding period, although Binford (1989) records no specific breeding information for the species in Oaxaca. Thus, the species could be a post-breeding wanderer in the area, although the possibility that it breeds locally can not be ruled out.

Buteo swainsoni Swainson's Hawk. [4] To 1900 m. Apr 18 to 27, Oct 19. Soaring over valley and lower slope areas, once apparently feeding on cicadas in scrub areas near Monte Albán.

Binford (1989) doubted a report of this species in our area. Howell and Webb (1995) report it as an uncommon to rare transient migrant in our area, Mar to Apr, and Sep to Oct, an assessment supported by my data. One to eight birds per observation. It is interesting that all spring dates recorded so far in central Oaxaca are past the late dates for the large trans-Isthmian movements reported by Schaldach et al. (1997) in late Mar.

Buteo albicaudatus White-tailed Hawk. [22] Most to 1800 m over valley scrub habitats. On Feb 7, 1998 a single bird was seen flying above the town of Benito Juárez at approximately 3050 m.

Binford (1989) and Howell and Webb (1995) report the species as common in our area, the former to a maximum elevation of 1980 m, the latter to 1500 m. My data support the assessments of previous authors, but occasionally found at higher elevations.

Buteo albonotatus Zone-tailed Hawk. [2] Jun 24, 1998, above the town of Benito Juárez, 3050 m, and May 10, 2001 from La Neveria, 2800 m, both areas of pine-oak-fir heavily modified for agriculture.

Unreported by Binford (1989). Howell and Webb (1995) indicate the species is a winter visitor only in Oaxaca, Sep to Apr. No evidence of breeding, though dates seem indicative of that possibility.

FALCONIDAE

Falco sparverius American Kestrel. [183] To 3000 m. Sep 21 to Apr 18. Widespread; most common in valley scrub areas, but also seen at high elevation clearings in pine-oak forests.

Binford (1989) reported the species from Sep 26 to Apr 19. Howell and Webb (1995) report it from Oct to Apr. In four years when I was present in fall, the species arrived in Sep.

Howell and Webb's (1995) map shows it as a permanent resident in a wide area of central Oaxaca, apparently including our area. My lack of records during the summer indicates the absence of the resident *tropicalis* race here. Hunn et al. (2001) did not report it in the southern interior mountains southwest of our area. Binford (1989) reported *tropicalis* from two interior locations



southwest and northwest of our area, considered it local in distribution.

CRACIDAE

Ortalis poliocephala West Mexican Chachalaca. [48] 1700 to 2250 m. In arid subtropical scrub, oak scrub, and lower elevations of pine-oak forest. All of my observations are in the southern or interior slope of the northern sierra, where the species seems to be fairly common.

Binford (1989) discounted a report of its occurrence here. Howell and Webb (1995) report it as a common to fairly common resident to 2400 m in part of interior Oaxaca. However, it appears that my westernmost record (ford on road to La Guacamaya) is about 60 km west of the most western interior area indicated on their map. Pairs have been seen three times in Mar, and vocalizations have been heard of dueting birds in May. The species is a breeding resident in central Oaxaca.

RALLIDAE

Porzana carolina Sora. [47] To 1700 m. Sep 29 to Apr 25. Marshes and marshy lake and river edges.

Unreported by Binford (1989). Howell and Webb (1995) report it as a common to fairly common, Aug to May, which my data support. However, scarcity of habitat makes the species uncommon in the area.

Porphyryla martinica Purple Gallinule. A single bird was seen On Oct 26, 2000. It was flushed from a weedy pond along the watercourse below the small dam just east of Teotitlan del Valle.

Previously unreported here. Vagrant.

Gallinula chloropus Common Moorhen. [19] All observations at small, reed grown ponds near the crossing of the Rio Salado on the road to San Juan Guelavía, 1580 m.

Previously unreported as breeding. An adult bird was seen at a nest located in a clump of reeds in about 8 cm of water from Jul 28 to Aug 7. On Aug 23 an adult was seen with a recently hatched chick. Full-sized immature birds were recorded Oct 6 and Nov 30. The small pond where the birds have been seen might offer a permanent suitable habitat, as I have never seen it totally dry, but all such wet areas are subject to some periodic drying in the central Oaxaca valleys, and the possibility exists that this is only a recent and impermanent colony.

Fulica americana American Coot. [143] To 1700 m. At area ponds and dams.

Unreported by Binford (1989). Howell and Webb (1995) report it as a common to fairly common winter resident, Oct to Mar, over summering widely in winter range. The species is regular at a number of locations in central Oaxaca, with up to 100 individuals occasionally recorded at the PAD, much lower numbers elsewhere. Dates of migratory movements are variable and confused by the presence in some years of over summering birds. Late spring dates from Mar 26 to May 26. Likewise, early

dates of fall arrivals can be confusing, with first fall records extending from Sep 29 to Nov 10. Over summering has not been recorded in most years, usually when spring rains are sufficient to maintain water levels in key habitats. The species has not been recorded from May 27 to Jul 20, but I believe this is due to lack of coverage of suitable habitat during summer months. No evidence has been noted of breeding in the area.

CHARADRIIDAE

Pluvialis dominica American Golden-Plover. [6] To 1680 m. Mar 15 to Apr 25. Edges of area ponds and dams.

Binford (1989) reported one record from our area on May 28. Howell and Webb (1995) report it as a fairly common to common transient migrant, primarily in spring, mid-Feb to May. My records are of one or two birds per spring. Rare spring transient migrant.

Charadrius semipalmatus Semipalmated Plover. M. Grosselet and I saw a single bird in breeding plumage on a small sandbar in the Rio Salado on August 11, 2000.

Previously unreported here. Rare vagrant.

Charadrius vociferus Killdeer. [18] To 1680 m. Sep 21 to May 17. Edges of area ponds, rivers, plowed fields.

Unreported by Binford (1989). Howell and Webb (1995) report it common to fairly common, Sep to Apr. My data together with Christmas Bird Count records provide at least one record for each of six winter seasons. Usually seen in small numbers, but on Nov 16, 2000 M. Grosselet and I counted 116 killdeer in a plowed field near the Tlacolula sewage discharge area. The bird seen on May 17 briefly did an injured wing display when I approached. Rare to irregularly fairly common in winter, rarely to mid-May.

RECURVIROSTRIDAE

Himantopus mexicanus Black-necked Stilt. [10] To 1680 m. Sep 3 to Oct 16; Mar 31 to Apr 25. Edges of area ponds and dams.

Unreported by Binford (1989). Howell and Webb's (1995) map shows this species as a breeding resident in all of Oaxaca, but their text states "fairly common to common but local breeder in interior south to central volcanic belt" with no mention of breeding in interior areas south of there. Spring records all pertain to a single bird in 1999, but recorded in four of six fall seasons. One to three birds per sighting. Rare and irregular transient migrant.

Recurvirostra americana American Avocet. [4] To 1620 m. Sep 29 to Nov 16. Edges of area ponds and dams.

Previously unreported here. Recorded in three of six years, one or two birds per observation. Rare transient migrant or vagrant.

JACANIDAE

Jacana spinosa Northern Jacana. A single immature bird was seen on March 5, 1999 at the small dam just east of



Teotitlan del Valle (1680 m), and presumably the same bird was seen on May 6, 1999 at the nearby PAD (1700 m).

Previously unreported here. Rare vagrant.

SCOLOPACIDAE

Tringa melanoleuca Greater Yellowlegs. [14] To 1700 m. Sep 15 to May 9. Edges of area ponds and dams.

Unreported by Binford (1989). Howell and Webb (1995) report it uncommon to rare, Jul to May. Although more records fall in Dec than any other month, there is a complete lack of records for all of Jan, Feb, and the first 26 days of Mar. The species does not appear to winter in the area, and is best considered a transient migrant in central Oaxaca.

Tringa flavipes Lesser Yellowlegs. [25] To 1700 m. Sep 5 to May 8. Edges of area ponds and dams.

Unreported by Binford (1989). Howell and Webb (1995) have it as fairly common to uncommon, Jul to May. All but two records fall in the months of Mar to May, with one sighting in Sep and one in Jan. The species does not winter in the area. Best considered as a transient migrant in central Oaxaca, mostly in spring.

Tringa solitaria Solitary Sandpiper. [30] To 1740 m. Jul 15 to Oct 31; Mar 13 to May 11; one winter record of Dec 23 to 31. Edges of area ponds and dams, also shallow, sluggish water courses.

Unreported by Binford (1989). Howell and Webb (1995) report it as fairly common to uncommon, mid-July to Oct, Apr to May, also an uncommon to rare winter visitor, Sep to April. My data confirm Howell and Webb's (1995) assessment, with the exception that spring migrants occasionally arrive earlier than Apr.

Bartramia longicauda Upland Sandpiper. No records.

Binford (1989) considered the species hypothetical. Howell and Webb (1995) report it as a fairly common to common transient, late Mar to mid-May, late Jul to mid-Oct. Areas of suitable habitat are provided by the grass-grown, exposed lake beds of the area during the spring drought and by heavily grazed pasture lands of the countryside. Hypothetical.

Calidris pusilla Semipalmated Sandpiper. [3] To 1680 m. Jul 28 to Aug 1. Edges of area ponds.

Previously unreported here. All records from 2001. Rare vagrant.

Calidris mauri Western Sandpiper. [3] To 1700 m. Sep 7, 24; Mar 30. Edges of area ponds and dams.

Previously unreported here. Rare transient migrant or vagrant.

Calidris minutilla Least Sandpiper. [83] To 1700 m. Jul 28 to May 5. Edges of area ponds and dams.

Unreported by Binford (1989). Howell and Webb (1995) report it as common to fairly common, Jul to May,

an assessment confirmed by my data. Flocks to 80 birds are recorded at favorable sites; often much lower numbers are seen. Furthermore, flock size sometimes varies markedly through the winter season at a given location. Some of this variation might be coordinated with the progressive drying up of small bodies of water throughout the winter, forcing birds to gather at suitable locations until these also dry up. First recorded fall dates have varied from Jul to Nov, but late spring dates more consistent, falling from Apr 22 to May 5 in four of five years.

Calidris bairdii Baird's Sandpiper. [61] To 1700 m. Aug 1 to Nov 16; Mar 15 to May 27. Edges of area ponds and dams.

Unreported by Binford (1989). Howell and Webb (1995) report it uncommon to fairly common, Aug to early Oct, mid-Mar to early Jun. Occurrence variable, at times fairly common (to 20 birds together and at several locations), but usually seen in small numbers, and unrecorded in some seasons. Recorded in early Nov in two fall seasons. These data confirm Howell and Webb's (1995) assessment, but present somewhat longer.

Calidris melanotos Pectoral Sandpiper. [21] To 1700 m. Aug 11, Oct 20; Mar 5 to May 18. Edges of area ponds and dams.

Unreported by Binford (1989). Howell and Webb (1995) report it as a fairly common to uncommon transient, mid-Jul to Nov, mid-Mar to early Jun. Most sightings are of single birds, up to eight together. Only two fall records. My data generally support Howell and Webb's (1995) assessment, although it seems to be less common than they indicate.

Calidris himantopus Stilt Sandpiper. No records.

Unreported by Binford (1989). Howell and Webb (1995) report it as a fairly common to uncommon transient, mid-Jul to Oct, late Mar to May. Sites that I regularly visit provide suitable habitat. Hypothetical.

Limnodromus scolopaceus Long-billed Dowitcher. One record, a single juvenile bird seen by myself, M. Grosselet, and R. Antonio on Nov 16, 2000 at the sewage discharge area just west of Tlacolula de Matamoros, 1600 m.

Unreported by Binford (1989). Howell and Webb (1995) reported it as a fairly common transient and winter visitor, Aug to May. Howell (1999) listed it at Teotitlan, with no date mentioned. Considering the scarcity of records, I consider the species a rare transient.

Gallinago gallinago Common Snipe. [38] To 3000 m. Oct 20 to Mar 13. Edges of area ponds and dams, wet fields, also occurs to 3000 m. in wet meadows bordering mountain streams in limited areas of the sierra.

Unreported by Binford (1989). Howell and Webb (1995) report it as an uncommon to fairly common winter visitor, Oct to Apr, to 3000 m, an assessment that my data support. One to 12 birds per sighting.



Phalaropus tricolor Wilson's Phalarope. [8] To 1700 m. Aug 22 to Sep 8; Apr 27 to May 9. Area ponds, dams, and rivers.

Unreported by Binford (1989). Howell and Webb (1995) report it as a fairly common to common transient, Jul to Oct, late Mar to early Jun. Recorded twice in spring, twice in fall in six years. Up to four birds per sighting. My data indicate that the species is an irregular and uncommon transient migrant.

Phalaropus lobatus Red-necked Phalarope. One record. Jan 30, 1998 at San Pablo Etla pond, 1620 m.

Previously unreported here. Accidental in central Oaxaca.

LARIDAE

Larus atricilla Laughing Gull. [10] To 1680 m. Dec 9 to 23, Apr 4 to Jul 28. At area ponds and dams.

Unreported by Binford (1989). Howell and Webb (1995) map it as a winter visitor, but text indicates it is uncommon to rare year round in southern interior Mexico. All observations have been of single birds. Confusing distribution of dates of my records makes status unclear, but it appears to be a very uncommon transient migrant.

Larus pipixcan Franklin's Gull. [3] To 1740 m. Apr 25 to Jun 10. At area ponds and dams.

Unreported by Binford (1989). Howell and Webb (1995) report it as an uncommon transient migrant, Sep to Dec, Mar to early Jun. Records of two single birds and a flock of 25. A rare and irregular transient migrant.

Sterna forsteri Forster's Tern. One record. A single bird Nov 19, 1997 at San Pablo Etla pond, 1620 m.

Previously unreported here. Vagrant.

Chlidonias niger Black Tern. One record. Two birds at the PAD, 1700 m, on Oct 18, 1997.

Unreported by Binford (1989). Howell and Webb (1995) report it as an uncommon to fairly common transient, late Jul to early Oct, May to early Jun. Due to lack of records I consider the species a very rare transient.

Discussion

The species reported on in this list can largely be divided into aquatic species and raptors, excepting *Ortalis poliocephala*. Of note is the fact that aquatic birds (including one raptor) as a group were commonly under reported in Binford's (1989) work. Forty-nine of these species were not reported at all in central Oaxaca. Four others were reported as rare or known from single specimens or sightings. Of these 53 species, some are in fact rare in the area (e.g. *Jacana spinosa*, *Calidris pusilla*, *Chlidonias niger*). Others are seasonal transient migrants, fairly common at times, but easily missed (e.g. *Calidris bairdii*, *C. melanotos*). Others show irregular occurrence patterns that might also explain their not being previously recorded (e.g. most anatids). A fair number of species are in fact at least fairly common, mostly during winter (e.g.

Ardea alba, *Fulica americana*). Whether looking at this latter group only, or at all the aquatic species collectively, there appears to be a large gap in the representation of this group of birds in Binford's (1989) list for the area.

It seems likely that at least some of these species were in fact not present in central Oaxaca previously. Binford's (1989) work was based largely on museum collections and field work prior to 1975, some from much earlier. Natural aquatic habitats are scarce in the area, and most aquatic species are seen at dams that have been constructed within the last 40 years, some being of more recent origin. Natural aquatic habitats that I know of are found in the marshy areas at Yagul and along the major rivers. Some small areas of wet meadow are also found along high elevation streams. No naturally occurring open water habitat, aside from the rivers, exists that I know of, and the marked increase in aquatic bird species and numbers in the area, as compared to Binford's (1989) list, is probably most directly related to an increase in man-made habitats that have benefited these species. Greater coverage also is a factor, as indicated by Binford's (1989) predictions that many of these species would eventually be found here.

Many of the *Ardeidae* are present here longer than Howell and Webb's (1995) dates for migration of these species would indicate, even allowing for over summering birds. Of the nine species known to occur here, there is at least some evidence that six begin to enter the central Oaxaca area in Jul or early Aug. Presumably these records reflect local movements from lowland areas rather than arrival of northern migrants. An exception to this pattern is *Bubulcus ibis*, which usually arrives late according to my observations.

Most duck species are of rare to uncommon and irregular occurrence in the area, the only exception being *Anas discors*. Howell and Webb's (1995) assessments of six of these species seem to overstate their presence in central Oaxaca. Though dams have made aquatic habitat more common than previously, it is still scarce in the area, and only limited areas are suitable for anatids to consistently winter here.

Status of some area raptors seems unclear, but the list of breeding species is growing and now includes *Elanus leucurus* and *Accipiter cooperii* (Forcey 2001), possibly also *Falco peregrinus* (Grosset 2001). Possibly *Asturina nitida*, *Parabuteo unicinctus*, and/or *Buteo albonotatus*, especially the latter two, will be added to that list in future. On the other hand, *Falco sparverius* is probably not present as a breeder in the area.

Of the species belonging to the families known as shorebirds, it can be said that, in spite of a fairly long list of species now recorded in the area, only one, *Actitis macularia*, can really be considered as a consistent and widespread wintering species. *Calidris minutilla* is also regularly present in winter, but has been found at a much lower number of locations, presumably due to more exacting habitat requirements. All other species are either rare or only present as transient migrants. Ten species from these families (including two hypothetical species) are over



reported by Howell and Webb's (1995) assessments, presumably reflecting a relative lack of suitable habitat in our area. The four species recorded from the family *Laridae* are also only known as vagrants or rare transient migrants; two are over reported by Howell and Webb (1995).

The five species that I have listed as hypothetical probably actually are rare transients here, as indicated by known migration patterns elsewhere, and with better coverage of the area in future we can expect that their rare presence will be confirmed.

With respect to the four species reported as breeding, *Tachybaptus dominicus*, *Elanus leucurus*, and *Gallinula chloropus* are all quite probably somewhat recent colonizers in the area. Though the species is

difficult to actually see, the vocalizations of *Ortalis poliocephala* are often and easily heard in spring, and why this species was not recorded previously with more frequency is probably best explained by a lack of field work done at the right time and place.

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