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SUMMER BIRDS OF ESTACIÓN CHAMELA AND VICINITY, JALISCO, MÉXICO

During the summers of 1972, 1973, and 1974, personnel of the Instituto de Biología, UNAM, the Michigan State University Museum, and the University of Illinois, Department of Zoology, engaged in a study of small mammal populations at Estación Chamela (Estación de Investigación, Experimentación, y Difusión Biológica de Chamela). The research area of 1,600 hectares is located five kilometers southeast of Chamela, Jalisco, and is the property of the Instituto de Biología of the Universidad Nacional Autónoma de México. Incidental observations of birds made during these studies are reported herein.

I am indebted to the Instituto de Biología, UNAM, for permission to study at Estación Chamela, to the Dirección General de la Fauna Silvestre, and to the Midwest Universities Consortium for International Activities (MUCIA Grant 591-II) and the Latin American Studies Center at MSU for financial support. I also thank my fellow workers: M. Alberto Ramos, J. J. Archambeault, M. W. Baker, D. L. Darling, T. W. Nelson, E. J. Rybak, C. Sánchez-Hernández, K. A. Shump, W. R. Teska, P. J. Tolson, and C. H. Warner Jr. for their field aid and contributions to the paper. I especially thank Dr. Rollin H. Baker for his skillful direction and instruction during this project.

The northcentral part of Estación Chamela (Lat. 19°31'N, Long. 105°01'W) in which we worked and camped can be described as tropical, deciduous thorn forest (see López-Forment *et al.* 1971). The land slopes up from the Pacific shore; the topography can be described as generally rolling. Trees are comparatively shorter on the hills and taller on the level areas and in the small, dry arroyos. When the tree canopy is dense, the undergrowth is usually sparse and vice versa. Undergrowth consists of herbaceous plants, shrubs and vines. Some logging of selected trees has been done in recent years. An unimproved road from Chamela to the small village of La Huerta bisects the area. Logging trails branch off of the road and have created openings in the undergrowth.

The land between our camp at the northern edge of Estación Chamela and Chamela has been cleared. It is used for the grazing of cattle and the production of crops, mainly corn, beans, and mangos.

The Chamela Arroyo is located to the north of the road and roughly parallels it. During July and August, the period of our observations, this broad arroyo (in the vicinity of Estación Chamela), was dry except for a few small pools of fresh water, and these were mostly dry in 1974. A variable amount of fresh water exists in the Chamela Arroyo near Chamela, and in a freshwater pond on the south side of Chamela by the highway. Some brackish pools of water are found near the beach.

The beach itself is sandy with spurs of rock and soil intersecting the beach and jutting into the Pacific. There are some mangroves along the beach. The shore drops off sharply, and rocky offshore islets are numerous.

Bird sighting from the three summers were concentrated in two places (Fig. 1). The first was the camp at Estación Chamela and the surrounding study area. The second was at the village of Chamela and the nearby beach. Casual observations were made along the road between the camp and the twon. The sightings were made from 24 July to 9 August in 1972, from 23 July to 5 August in 1973, and from 24 July to 10 August in 1974. With the exception of the White-tailed Kite *Elanus leucurus*, the species seen were typical of the area (Table 1 and 2).

One hawk, *Buteo magnirostris* (Gmelin), was seen once along the Chamela Arroyo and could be attributed to neither of the main areas of observation. *Micrastur semitorquatus*, *Scardafella inca*, and the *Columbina* species were more frequently seen on or over the farm land than elsewhere. Three species caugth in mist nets,

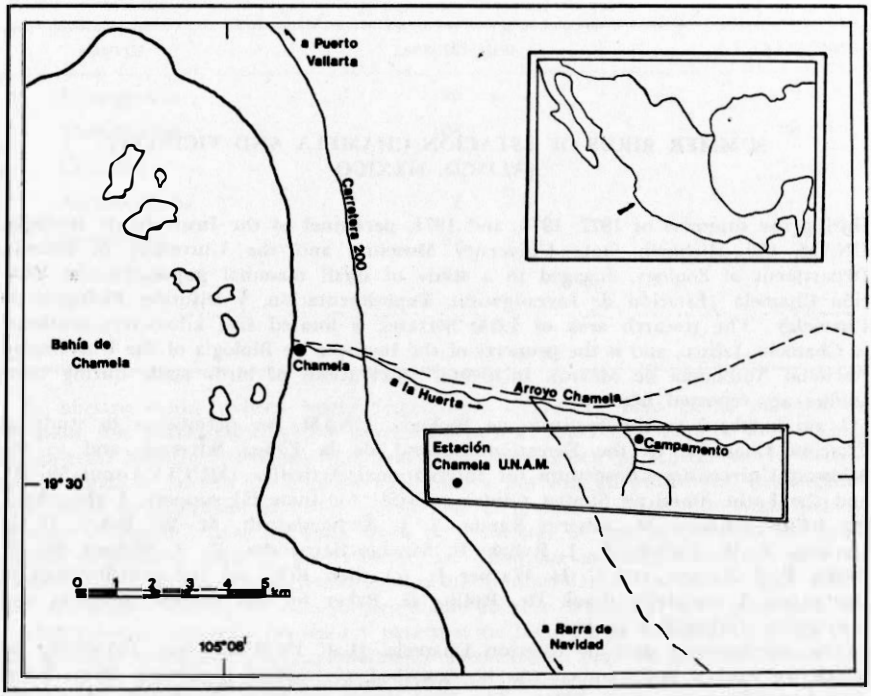

Fig. 1. The Chamela area, coastal Jalisco. México (adapted from Sánchez-Hernández 1972).

Attila spadiceus, Turdus rufo-palliatus and *Rhodinocichla rosea,* were not observed in the wild. Two other species were identified at the camp, *Buteo brachyurus* Vieillot and *Vireo pallens* Salvin, but these are not included on the lists since the identifications were not definitive.

The following observations pertain to July-August, 1973, unless otherwise specified.

1. A *Sula leucogaster* in immature plumage was noted at the beach on 24 July. Sánchez-Hernández (1972) found this species breeding on the islets in Chamela Bay. The observations of *Anous stolidus and Sterna albifrons* on 9 August, 1974, suggest the possibility that these species also breed on the islets.

2. A *Dendrocygna autumnalis,* with at least one downy young was noted on 29 July, 1972.

3. An *Elanus leucurus* was closely observed at Chamela on 24 July, 1974; another specimen was sighted in the farming area between Chamela and the camp on 29 July, 1974. Although Friedmann (1950) cites no record of this kite for Jalisco, the presence of this species is not unexpected since its range and numbers have been expanding in recent years.

4. Two *Ortalis wagleri* with young were noted on 7 August, 1972.

5. The presence of the larger pigeons and parrots at Estación Chamela seemed to correspond with the abundance of fruit, especially in tall trees. As the supply of ripe fruit waxed and waned, so did the numbers of those bird species observed. The two types of tree fruits involved in 1973 were not identified. Sánchez-Hernández (pers. comm. via R. H. Baker, 1974) has suggested that availability of fresh water is also a factor affecting bird sightings in the area, and may be a limiting factor for the populations of the more sedentary species.

TABLE 1

A LIST OF BIRDS FROM ESTACION CHAMELA. THE METHOD OF CAPTURE AND THE NUMBER PRESERVED AS SPECIMENS ARE LISTED IN PARENTHESES FOLLOWING THE SCIENTIFIC NAMES. THE NOMENCLATURE IS THAT OF FRIEDMANN, GRISCOM AND MOORE (1950, 1957) EXCEPT FOR CHANGES THAT ARE NOTED WITH AN ASTERISK. THE CHANGES CORRESPOND WITH THE NOMENCLATURE OF THE 5TH EDITION OF *THE A.O.U. CHECK-LIST OF NORTH AMERICAN BIRDS* (1957) AND THE "THIRTY-SECOND SUPPLEMENT TO THE A.O.U. CHECK-LIST OF NORTH AMERICAN BIRDS", *AUK* (APRIL, 1973)

Dendrocygna autumnalis (Linnaeus)
Cathartes aura (Linnaeus)
Buteo nitidus (Latham)
Micrastur semitorquatus (Vieillot)
Ortalis wagleri Gray
Columba flavirostris Wagler
Scardafella inca (Lesson) (net-1)
* *Columbina passerina* (Linnaeus) (Net-0)
* *Columbina talpacoti* (Temminck)
Leptotila verreauxi (Bonaparte) (Net-0)
Ara militaris (Linnaeus)
Aratinga holochlora (Sclater)
Aratinga canicularis (Linnaeus)
Amazona finschi (Sclater)
Coccyzus minor (Gmelin)
Piaya cayana (Linnaeus)
Glaucidium sp.
Ciccaba virgata (Cassin) (shot-1, net-0)
Nyctidromus albicollis (Gmelin) (net-0)
Caprimulgus ridgwayi (Nelson)
Chlorostilbon canivetii (Lesson)
Cynanthus latirostris Swainson
Amazilia rutila (De Lattre) (net-0)
Tilmatura dupontii (Lesson)
Trogon citreolus Gould
Momotus mexicanus Swainson
Dryocopus lineatus (Linnaeus)
Centurus chrysogenys (Vigors) (net-0)
Phloeoceastes guatemalensis (Hartlaub)
Xiphorhynchus flavigaster Swainson (net-1)
Attila spadiceus (Gmelin) (net-0)
Myiodynastes luteiventris Sclater (net-0)
Megarhynchus pitangua (Linnaeus)
Myiarchus nuttingi Ridgway
Myiarchus tyrannulus (Muller) (net-1)
* *Cissilopha sanblasiana* (Lafresnaye)
Thryothorus sinaloa (Baird) (net-0)
Thryothorus felix Sclater
* *Turdus rufo-palliatus* Lafresnaye (net-1)
Turdus assimilis Cabanis
Polioptila albiloris nigriceps Baird
Vireo hypochryseus Sclater
Vireo flavoviridis (Cassin) (net-14)
Parula pitiayumi (Vieillot) (net-0)
Cassiculus melanicterus (Bonaparte)
Icterus pustulatus (Wagler) (net-0)
Tanagra affinis Lesson
Rhodinocichla rosea (Lesson) (net-1)
Saltator coerulescens Vieillot
Pheucticus chrysopeplus (Vigors) (net-1)
Cyanocompsa parellina (Bonaparte (net-5)
Volatina jacarina (Linnaeus)

TABLE 2

A LIST OF BIRDS OF CHAMELA, INCLUDING THE MOUTH OF THE ARROYO CHAMELA, A LARGE FRESH WATER POND SOUTH OF CHAMELA, AND THE OCEANFRONT. THE NOMENCLATURE IS THE SAME AS TABLE 1

Sula leucogaster (Boddaert)
Phalacrocorax sp.
Anhinga anhinga (Linnaeus)
Fregata magnificens Mathews
Casmerodius albus (Linnaeus)
* *Egretta thula* (Molina)
Cochlearius cochlearius (Linnaeus)
Mycteria americana Linnaeus
* *Eudocimus albus* (Linnaeus)
Cathartes aura (Linnaeus)
Elanus leucurus (Vieillot)
* *Tringa melanoleuca* (Gmelin)
Catoptrophorus semipalmatus (Gmelin)
Numenius americanus Bechstein
Himantopus mexicanus (Muller)
Larus atricilla Linnaeus
Sterna albifrons Pallas
* *Anous stolidus* (Linnaeus)
Crotophaga sulcirostris Swainson
Chloroceryle americana (Gmelin)
Cassidix mexicanus (Gmelin)
Icterus graduacauda Lesson

6. A large flock of *Leptotila verreauxi* maintained a nocturnal roost in the canopy of one of the small, dry arroyos one kilometer northwest of camp during the first week of our study.

7. The number of *Coccyzus minor* observed at the camp site during 1974 was notable, expecially since none were seen in previous years. Nelson (pers. comm., 1974) reported that the species was "common", and at least one was seen or heard daily.

8. *Amazilia rutila* was common at the camp until the 27th of July. On that date, a severe storm dislodged a large number of a bromeliad species at which the hummingbirds had been feeding. The number of hummingbirds seen at the camp declined thereafter. *Cynanthus latirostris* was also seen feeding at the bromeliads.

9. A nest of *Xiphorhynchus flavigaster* was found near camp during the first week of our study in 1972. The nest was in a hole in a slender standing tree, and the young were heard when they were being fed.

10. A nest of *Thryothorus sinaloa* was found directly over camp. The adult(s) were seen carrying food into the nest, and the cries of the nestlings were heard during the first week of August.

11. A *Turdus rufopalliatus* in immature plumage was caught in a mist net on 30 July.

12. An adult *Vireo flavoridis* was seen feeding fledglings, and another adult was observed taking food to a nest during the last week of July.

13. An *Icterus pustulatus* in immature plumage was caught on 28 July.

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