

Fig. 1. Side and frontal views of the spread-wing sunbathing posture of juvenile White-faced Ibis.

and sunbathed during the warmer part of the day, but the adults were not seen sunbathing with spread wings in this manner.—JAMES A. RODGERS, JR., *Museum of Zoology, Louisiana State University, Baton Rouge, Louisiana 70803. Present address: Department of Biology, University of South Florida, Tampa, Florida 33620.* Accepted 24 Jan. 75.

Plain Chachalaca food habits in south Texas.—Little information is available on the food habits of the northern race of the Plain Chachalaca (*Ortalis vetula mcalli*). The stomach of one specimen, examined by Cottam and Knappen (1939), contained fruits of granjeno (*Celtis pallida*) and seedless husks of honey mesquite (*Prosopis glandulosa*). Vaurie (1968: 145–146) and Delacour and Amadon (1973: 93) also indicated that these birds are primarily herbivorous, but quantitative data were lacking. This paper describes the diet of the Plain Chachalaca as determined by an extensive investigation of the species.

I collected chachalacas by shooting between September 1971 and August 1972 on two study tracts in the Lower Rio Grande Valley of Texas. A total of 42 collected specimens had food items in their distensible esophagi. These food items were identified, segregated, and measured volumetrically, while wet, by water displacement (Martin 1963). Foods displacing less than 0.1 cc were recorded as trace. Percent by volume of each food item was determined by dividing its volume by the total volume of all foods (Martin et al. 1946). The frequency of occurrence, calculated as the percent of all gullets containing a specific food item, also was determined.

In addition to detailed studies of gullet contents, study of feeding birds in the field provided additional food habit information. Gross observations of seasonal variability of major food items also were recorded to aid investigation of the relationship between food preference and availability.

TABLE 1
ESOPHAGEAL CONTENTS OF PLAIN CHACHALACAS FROM SOUTH TEXAS, 1971-72

Food item	Part eaten ¹	Percent	
		Volume	Frequency
PLANT FOODS			
Coyotillo (<i>Karwinskia humboldtiana</i>)	br	28.2	17
Mexican ash (<i>Fraxinus berlandieriana</i>)	st	19.2	5
Pigeon-Berry (<i>Rivina humilis</i>)	bd, br	10.4	24
Cedar elm (<i>Ulmus crassifolia</i>)	sd	10.1	5
Anacua (<i>Ehretia anacua</i>)	br	8.2	17
Coma (<i>Bumelia lanuginosa</i>)	br	4.2	10
American nightshade (<i>Solanum americanum</i>)	lv	3.8	12
Chapotillo (<i>Amyris texana</i>)	br	3.7	10
Pink mint (<i>Stachys drummondii</i>)	lv	2.3	5
Panalero (<i>Forestiera angustifolia</i>)	fl, lv	2.2	2
Granjeno (<i>Celtis pallida</i>)	br	1.2	5
Guayacan (<i>Porlieria angustifolia</i>)	br	0.5	2
Texas nightshade (<i>Solanum triquetrum</i>)	br	0.5	5
Chillipiquin (<i>Capsicum annuum</i>)	br	0.4	2
Western ragweed (<i>Ambrosia psilostachya</i>)	lv	0.3	2
Sugar hackberry (<i>Celtis laevigata</i>)	bd, br, lv	0.3	2
Huisache (<i>Acacia farnesiana</i>)	sd	0.2	2
Common sunflower (<i>Helianthus annuus</i>)	lv	0.1	2
White clover (<i>Trifolium repens</i>)	lv	tr ²	2
Serjania (<i>Serjania brachycarpa</i>)	sd	tr	2
Unknown herbaceous plant material		1.1	21
Unknown woody plant material		0.1	5
ANIMAL FOODS			
Gastropoda, snails		1.6	5
Lepidoptera, caterpillars		1.4	5
Hemiptera, lace bug		tr	2
Feather pieces		tr	5

¹ Abbreviations for plant parts: br = berries, bd = buds, fl = flowers, lv = leaves, sd = seeds, st = stamens.

² tr = trace (less than 0.1%).

Food items in the esophagi of these 42 chachalacas included a wide variety of succulent plant materials and very little animal matter (Table 1). Plant species that provided more than 76% (by volume) of the foods in the diet were coyotillo (*Karwinskia humboldtiana*), Mexican ash (*Fraxinus berlandieriana*), pigeon-berry (*Rivina humilis*), cedar elm (*Ulmus crassifolia*), and anacua (*Ehretia anacua*). Small fruits and buds of pigeon-berry occurred most frequently; anacua and coyotillo berries also were frequently recorded. Only four birds contained animal matter; this included several small snails, caterpillars, and a lace bug (probably consumed on plant material). Previous reports (Grzimek 1972: 444; Delacour and Amadon 1973: 12) have indicated that other members of the family Cracidae occasionally ingest soil. These specimens contained no soil.

On 49 occasions in the field, I noted that chachalacas consume an even wider variety of plant foods than was found in the esophagi. Natural foods not found in gullets included leaves of dicliptera (*Dicliptera vahliana*) and brasil (*Condalia hookeri*) and berries of the chinaberry tree (*Melia azedarach*). Food also is provided by ornamental plants, including papaya (*Carica papaya*), firethorn (*Pyracantha* sp.), and

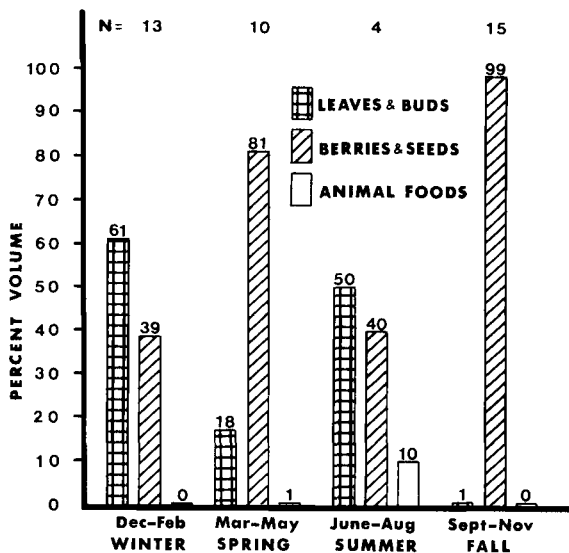


Fig. 1. Seasonal variation in relative volume of foods consumed by Plain Chachalacas in south Texas, 1971-72.

Carolina-lily (*Lilium michauxii*). These foods are eaten only when there is an obvious scarcity of preferred wild foods.

Visual estimates of availability of major foods were made during all months of the year. Berries and seeds were relatively abundant during the late spring (1972) and late fall (1971), particularly after the floods associated with Hurricane Fern in 1971. Berries and seeds were scarce during the late winter and late summer of both years. The food habits of chachalacas were closely associated with the availability of natural foods (Fig. 1). Greater quantities (in percent volume) of berries and seeds were consumed during the spring and fall (81 and 99% respectively) than during the winter and summer (39 and 40% respectively). Relatively greater volumes of leaves and buds were consumed during the winter and summer (61 and 50% respectively) than during the spring and fall (18 and 1% respectively). Consumption of animal matter increased from spring (1%) to summer (10%), but these foods were of little importance in the total diet.

Chachalacas become rather gregarious in the fall and winter and form loose feeding flocks concentrated near food sources. It is not uncommon to see four to six birds in one fruit-laden shrub or tree feeding on small fruits and berries. Feeding birds selected the ripest fruits available and often used precarious positions (even upside down) to reach these foods. When foods were scarce, chachalacas searched the ground for fallen fruits and berries. Unlike many gallinaceous birds, this species does not scratch the ground in searching for food.

When natural foods are scarce, chachalacas occasionally damage crops in nearby cultivated fields. Interviews with six farmers in the Lower Rio Grande Valley yielded information concerning extent of damages. Crops reportedly eaten included cantaloupes, honeydew melons, citrus, lettuce, sorghum, and tomatoes. All farmers

interviewed stated that chachalaca damage was negligible and all favored keeping these birds on their lands.

Supplemental feeding of birds during the winter months has been conducted for many years on one of the two major study areas, Santa Ana National Wildlife Refuge. Throughout the Lower Rio Grande Valley, chachalacas also are fed in backyard feeders and many of them depend on these food sources during winter months. It has been suggested (Marion 1974) that survival during the stressful winter months has increased throughout the Lower Rio Grande Valley through supplemental feeding.

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The Common Snipe in Surinam.—In Surinam the South American Common Snipe (*Capella gallinago paraguayiae*) is plentiful on wet savannas, ricefields, and marshes. It is present through the year; but considerable wandering or local migration must occur, for when rains make a suitable habitat available, snipe suddenly appear, only to leave as soon as the ground dries out. I found them nesting in the long rainy season only once, on 30 May 1954 when I collected a nestling on a wet savanna near Zanderij (Haverschmidt 1968).

Some accounts (Hellmayr and Conover 1948, Meyer de Schauensee 1966, Snyder 1966) state that its northern relative Wilson's Snipe (*C. g. delicata*) winters as far as the Guianas. The two races cannot be distinguished in the field, but the clear figures and tables in Tuck (1972) make birds in the hand readily separable. During