

THE IMPORTANCE OF THE RICE-GROWING REGION OF SOUTH-CENTRAL LOUISIANA TO WINTER POPULATIONS OF SHOREBIRDS, RAPTORS, WADERS, AND OTHER BIRDS

J. V. Remsen, Jr., M. Mark Swan*, Steven W. Cardiff, and Kenneth V. Rosenberg

*Museum of Natural Science, Louisiana State University
Baton Rouge, LA 70803*

Abstract

A census was conducted on 21 February 1988 within a 3522 sq. km area in the rice-growing region of south-central Louisiana by counting birds from roads that transect the area. An extrapolation from the transect counts of four separate parties to the 3086 sq. km of fields within the census area provides estimates of the abundance of certain species. These estimates show that the region supports important populations of several herons (especially Great Egret, Snowy Egret, and Great Blue Heron), two ibises (White and White-faced), three raptors (Northern Harrier, Red-tailed Hawk, and American Kestrel), several shorebirds (especially Long-billed Dowitcher, Western Sandpiper, Killdeer, Dunlin, and Common Snipe), and Loggerhead Shrike. Approximately 225,000 shorebirds may winter in the region. The census, in concert with our additional fieldwork in the region, has documented that several species have either increased greatly or were more common than expected: Glossy Ibis, Canada Goose, Ross' Goose, Black-bellied

*Present address: 792 Kenmore St.,
Baton Rouge, LA 70806.

Plover, Black-necked Stilt, Stilt Sandpiper, Laughing Gull, Gull-billed Tern, and Boat-tailed Grackle. Crows are inexplicably scarce in the region, in spite of seemingly suitable habitat.

Introduction

Recent fieldwork in the rice-growing region of south-central Louisiana has shown that in winter this area supports high densities of certain open-country birds and waterbirds, especially geese, hawks, blackbirds, Loggerhead Shrikes, and shorebirds. To document such populations, we conducted a one-day census in late winter, on 21 February 1988. Because this region had been visited infrequently by birders, our census provides some of the first quantitative data on bird abundance in the region. In addition to the census results, for certain species we also report findings from our additional fieldwork in the region, including the first two Crowley Christmas Bird Counts (hereafter CBC; held on 16 December 1988 and 19 December 1989).

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Methods

Four parties censused a roughly rectangular area of about 3522 sq. km bounded on the north by the Interstate 10 freeway, on the south by Hwy. 14, on the east by Hwy. 343, and on the west by Bayou Lacassine (Fig. 1). This area included portions of Lafayette, Acadia, Vermilion, and Jefferson Davis parishes (and a minute portion of extreme northeastern Cameron Parish).

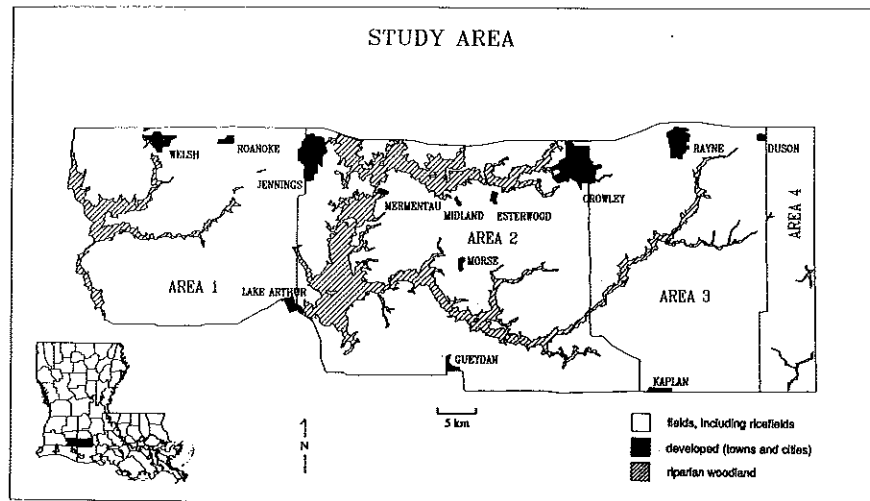
Each party censused one of four areas. Area 1, the westernmost block, extended east to Hwy. 26, south of Jennings. Area 2 extended from Hwy. 26 east to Hwy. 13, south of Crowley. Area 3 extended from Hwy. 13 east to Hwy. 343. Area 4 extended from Hwy. 343 east to Hwy. 167. Each party attempted to cover as many roads as possible, but in none of the four areas were all roads covered. The parties consisted of: SWC and Donna L. Dittmann in Area 1, JVR and MMS in Area 2, KVR and Chris Canaday in Area 3, and Peter P. Marra and Mary C. Garvin in Area 4. Participants drove roads while looking for concentrations of birds and counted all birds seen or heard while driving or stopped.

Our primary goal was to find as many shorebirds, hawks, and Loggerhead Shrikes as possible. We walked only to approach birds for identification purposes. We concentrated on secondary roads in agricultural areas, particularly those with

rice fields at various stages of cultivation. At this time of the year, a few fields are just beginning to be plowed and graded in preparation for spring planting. There are many flooded or partially flooded fields with rice stubble from the preceding fall, as well as other flooded, muddy fields. Because most shorebirds occurred in flocks that required careful scrutiny, census techniques that use brief stops (e.g., the Breeding Bird Surveys of the U.S. Fish and Wildlife Service) were inappropriate. Although the rice-growing region probably supports major populations of some rails, and possibly the declining Short-eared Owl, our census technique was inappropriate for estimating these populations.

Although our study area included towns and patches of riparian deciduous forest (Fig. 1), such habitats were avoided where possible; woodland birds were counted when noted, primarily in hedgerows and woods that bordered agricultural areas. (For more representative counts of landbirds in the region, see the 1988 and 1989 Crowley CBCs; the hedgerows and windbreaks in particular support high densities of wintering Ruby-crowned Kinglets, Blue-gray Gnatcatchers, Orange-crowned Warblers, and White-crowned Sparrows.)

To extrapolate our transect results (Table 1) to the entire study area, we assumed that we counted all individuals within 1/4-mile of the roads covered for the following: herons, ibises, geese,



ducks, hawks, American Coot, all shorebirds, gulls and terns, crows, N. Mockingbird, Loggerhead Shrike, European Starling, Red-winged Blackbird, and Boat-tailed Grackle. This assumption, of course, is valid to varying degrees for each of these kinds of birds. Certainly, our counts of large, conspicuous species were more complete within this 1/2-mile strip than our counts of the small, less conspicuous species. In any case, the assumption is conservative: our extrapolations to the area as a whole will be underestimates of true populations. Because in most areas a majority of the geese and Red-winged Blackbirds were tallied as flocks passed overhead, we did not attempt to extrapolate their numbers to the region as a whole. Also, census results showed that some herons, all ducks, some shorebirds, some gulls and terns, and crows were too patchily distributed within the region to permit an extrapolation to the region as whole. We believe, however, that for the remaining

species (Table 2) an extrapolation from the area covered by our road counts (257 road miles X 1/4 mile on either side of the road = 128.5 sq. miles) to the area of fields in the region as a whole (3086 sq. km = 1191 sq. miles; Table 3) can provide a crude measure of these species' absolute abundances in the region. Note that such an extrapolation overestimates slightly the area covered because at every square corner in such a transect route, a square 1/4-mile area is duplicated in the estimate of area covered. However, the conservative assumption that we counted all individuals within 1/4-mile of either side of the road may counterbalance this duplication. Our calculations also assume that the areas visible 1/4-mile from the roads did not differ significantly in bird abundance or composition from those areas beyond 1/4-mile or from those roads not covered. Without an extensive analysis of the disturbance created by vehicles or habitat distribution using aerial

Table 1. Census totals for all species recorded in the survey. Unusual species are boldfaced. Parentheses indicate road-kills. See text for details.

Species	Total	Area 1	Area 2	Area 3	Area 4
Pied-billed Grebe	54	13	32	4	5
Am. White Pelican	30	30	--	--	--
Double-cr. Cormorant	11	11	--	--	--
Great Blue Heron	49	14	19	3	13
Great Egret	518	68	74	265	111
Snowy Egret	327	85	183	18	41
Little Blue Heron	6	2	--	4	--
Cattle Egret	159	63	21	53	22
Blck-cr. Night Heron	8	8	--	--	--
White Ibis	1941	1521	235	185	--
Glossy Ibis	3	--	3	--	--
White-faced Ibis	1594	743	196	655	--
Gr. White-fr. Goose	17,700	9500	4200	4000	--
Snow Goose	36,220	19,800	9970	6450	--
Ross' Goose	105	82	3	20	--
Canada Goose	952	452	500	--	--
Green-winged Teal	1805	1290	15	500	--
Mottled Duck	58	58	--	--	--
Mallard	179	58	32	85	4
Northern Pintail	652	194	8	450	--
Blue-winged Teal	64	7	1	35	21
Cinnamon Teal	1	--	--	1	--
Northern Shoveler	2806	506	1610	630	60
Gadwall	203	144	47	2	10
American Wigeon	389	284	50	55	--
Ring-necked Duck	71	71	--	--	--
Ruddy Duck	4	4	--	--	--
Turkey Vulture	8	1	1	--	6
Northern Harrier	104	44	33	17	10
Red-shouldered Hawk	4	2	2	--	--
Red-tailed Hawk	241	77	102	39	23
American Kestrel	136	64	40	23	9
Peregrine Falcon	1	1	--	--	--
King Rail	6	3	--	3	--
American Coot	1324	512	342	270	200
Black-bellied Plover	192	32	--	160	--
Lesser Golden-Plover	1	--	--	1	--
Semipalmated Plover	1	--	1	--	--
Killdeer	4490	1218	1057	1315	1400
Black-necked Stilt	187	--	7	135	45
Greater Yellowlegs	289	39	16	225	9
Lesser Yellowlegs	1401	67	58	1200	76
Western Sandpiper	6252	1867	4035	350	--
Least Sandpiper	142	131	6	5	--

Dunlin	1695	1050	545	100	--
Stilt Sandpiper	51	1	38	12	--
Long-billed Dowitcher	8691	1235	4221	3160	75
Common Snipe	551	66	30	155	300
Wilson's Phalarope	1	1	--	--	--
Laughing Gull	9	--	--	8	1
Ring-billed Gull	300	65	39	152	44
Herring Gull	1	--	--	1	--
Gull-billed Tern	11	10	--	1	--
Forster's Tern	35	4	3	1	27
Rock Dove	17	15	2	--	--
Mourning Dove	317	179	88	26	24
(Barn Owl)	(1)	--	--	(1)	--
Barred Owl	2	2	(1)	--	--
Belted Kingfisher	3	1	1	--	1
Red-bellied Woodpecker	6	--	4	2	--
Yellow-bellied Sapsucker	1	--	--	1	--
Downy Woodpecker	3	1	--	--	1
Northern Flicker	10	1	2	2	5
Eastern Phoebe	11	5	3	3	--
Horned Lark	7	--	7	--	--
Purple Martin	2	--	2	--	--
Blue Jay	59	10	28	14	7
American Crow	5	--	--	2	3
Fish Crow	11	--	--	11	--
crow sp.	7	--	--	--	7
Carolina Chickadee	10	2	6	2	--
Carolina Wren	8	--	5	3	--
House Wren	8	2	4	2	--
Sedge Wren	5	4	--	1	--
Ruby-crowned Kinglet	8	--	6	2	--
Blue-gray Gnatcatcher	2	--	1	1	--
Hermit Thrush	2	2	--	--	--
American Robin	5026	3205	916	125	780
Northern Mockingbird	186	47	74	37	28
Brown Thrasher	8	1	3	4	--
American Pipit	193	28	13	120	32
Cedar Waxwing	97	17	--	--	80
Loggerhead Shrike	471	175	142	108	46
European Starling	1910	630	420	300	560
White-eyed Vireo	2	--	1	1	--
Solitary Vireo	1	--	1	--	--
Orange-crowned Warbler	7	--	5	2	--
Yellow-rumped Warbler	237	99	48	35	55
Pine Warbler	1	--	--	--	1
Common Yellowthroat	19	8	7	3	1
Northern Cardinal	149	44	48	43	14
Rufous-sided Towhee	1	--	--	1	--
Savannah Sparrow	1170	430	261	390	89
LeConte's Sparrow	1	--	1	--	--

Table 2. Population Estimates for certain species in the 1191 sq. miles of fields in the region covered by the census; see text for calculations.

Species	Estimated Pop.
Great Blue Heron	454
Great Egret	4801
Snowy Egret	3031
Cattle Egret	1473
White Ibis	17,993
White-faced Ibis	14,776
Northern Harrier	964
Red-tailed Hawk	2234
American Kestrel	1261
American Coot	12,274
Killdeer	46,257
Greater Yellowlegs	2679
Western Sandpiper	57,956
Dunlin	15,713
Silt Sandpiper	473
Long-b. Dowitcher	80,556
Common Snipe	5107
Ring-billed Gull	2781
Forster's Tern	325
Northern Mockingbird	1724
Loggerhead Shrike	4366
Brewer's Blackbird	1066
Boat-tailed Grackle	2698

photographs, both clearly beyond the scope of this study, this assumption cannot be evaluated critically. We believe, however, that this is a reasonable assumption for level terrain with a rectangular network of roads. Our impressions are that the roads that we traveled sampled the region without strong biases (except that we avoided stopping at wooded areas, which formed only a tiny percent of the total area).

Count day was cloudless, there was no wind, and the temperature was 46-75° F (8-24° C). Recent heavy rains left standing water in many fields and made some roads impassable.

English names follow the AOU Check-list (1983 and supplements), where scientific names for all species in the text

may be found.

Results and Discussion

Populations

The complete counts for each Area are presented in Table 1. Although these numbers provide an index of the relative abundance of the more conspicuous species, we here attempt to estimate total population size of some species in the study area as a whole. We emphasize that these extrapolations are only a crude, first-order approximation of absolute abundance. However, we feel that they provide a conservative estimate of the total abundance of some species in the region.

Our data (Table 2) show that the rice-growing region of south-central Louisiana supports important winter populations of Great Blue Heron, Great Egret, Snowy Egret, White Ibis, White-faced Ibis, Northern Harrier, Red-tailed Hawk, American Kestrel, Killdeer, Western Sandpiper, Dunlin, Long-billed Dowitcher, Common Snipe, and Loggerhead Shrike.

With the recent dramatic declines of the shrike in much of the eastern United States (Morrison 1981, Burnside and Shepherd 1985, Robbins *et al.* 1986), its abundance in the census area is encouraging. If such declines eventually affect Louisiana populations, these census data will provide important comparative data. Because our April censuses in 1988 and other years yielded similar numbers of

Table 3. Habitat distribution in study area

	% by area	Acres	Hectares	% by habitat
Area 1	24.9			
Fields		197,649.4	80,020.0	91.1
Towns		3,537.2	1,432.1	1.6
Woodland		15,741.4	6,373.0	7.3
Total		216,928.0	87,825.1	100.0
Area 2	41.5			
Fields		286,010.7	115,793.8	79.1
Towns		9,019.5	3,651.6	2.5
Woodland		66,357.5	26,865.3	18.4
Total		361,387.5	146,310.7	100.0
Area 3	25.7			
Fields		211,547.0	85,646.6	94.5
Towns		5,513.0	2,232.0	2.5
Woodland		6,832.2	2,766.1	3.1
Total		223,892.2	90,644.6	100.0
Area 4	7.8			
Fields		66,944.0	27,102.8	98.7
Towns		0.0	0.0	0.0
Woodland		849.6	344.0	1.3
Total		67,793.6	27,446.8	100.0
All Areas	100.0			
Fields		762,151.1	308,563.2	87.6
Towns		18,069.7	7,315.7	2.1
Woodland		89,780.5	36,348.4	10.3
TOTAL		870,001.3	352,227.2	100.0

shrikes per road-mile, we feel that our February totals represent resident birds rather than migratory wintering populations. A more detailed analysis of Loggerhead Shrike populations within Area 3, based on censuses carried out over a four year period, supports this conclusion (KVR, unpubl. data).

Our census results also show that the rice-growing region is an important area for wintering shorebirds, perhaps the most important inland area in the United States. Our extrapolations yield an estimate of 208,751 individuals for the 7 species in Table 2. Inclusion of the other 7 shorebird species from Table 1 would boost the total population estimate to 226,595 individuals.

The 1988 Crowley CBC recorded 21,989 individual shorebirds of 15 species in the 15-mile diameter circle;

the 1989 CBC recorded 20,604 individuals of 14 species. Extrapolation from the 177 sq. mile CBC circle to the 1191 sq. miles of fields in the region yields estimates of 147,960 (1988) and 138,641 (1989) wintering shorebirds. Although these estimates are 35% and 39% lower than the estimate from our census, even this degree of similarity is reassuring given the major assumptions involved in both calculations and the potential differences between years and times of years (December vs. February). The extrapolation from the CBC assumes conservatively that 100% of the individual birds within the circle were censused; this in part may account for the lower estimate of the total shorebird population. Another reason that the estimates from the CBC's were lower might be the poor weather

conditions that plagued both counts. Even so, the 1988 Crowley CBC totals for four species (Killdeer 4465, Lesser Yellowlegs 517, Long-billed Dowitcher 7159, and Common Snipe 813) and the 1989 totals for three species (Killdeer 7187, Long-billed Dowitcher 6404, and Common Snipe 2339) were the highest recorded for those species on any North American CBC in those years (and the two Ruffs and 2339 Common Snipe set all-time CBC records).

Comments on seasonality

Although our intent was to census winter populations, we suspect that spring migration had already begun for several species (besides Purple Martin, obviously not a wintering species). A comparison of the totals with field notes from trips to the region earlier in January and February 1988 causes us to suspect that the totals for Lesser Yellowlegs, Green-winged and Blue-winged teal, and Northern Pintail were augmented substantially by early spring migrants. The Lesser Golden-Plover was almost certainly a spring migrant and tied the previous earliest record for Louisiana (21 February 1977, near Welsh; R. J. Newman *et al.*). Census data from within Area 3 from throughout the winter support these conclusions (KVR, unpubl. data).

Comments on distribution and rarities

J. La. Ornith.

Glossy Ibis: This species has been considered to be very rare in western Louisiana. In recent years, however, with better information on field separation of this species from White-faced Ibis (Pratt 1976), increasing scrutiny of *Plegadis* flocks in nearby Cameron Parish has revealed that this species occurs there regularly in small numbers. There are now 30+ records from 1983 to 1989 in the *American Birds* file at the Museum of Natural Science, Louisiana State University. Also, KVR saw three in Area 4, 5 miles south of Duson, Lafayette Par., on 17 March 1987, and one in Area 3 on the 1988 Crowley CBC and SWC and D. Dittmann saw five in Area 2 on the 1989 CBC. Therefore, the sightings in the census area, one in Acadia Par. and two in Vermilion Par., although not unexpected, were nevertheless the first reports for these parishes. This species probably occurs regularly in the region, but the difficulty in seeing individual *Plegadis* well enough for positive identification makes detection infrequent.

Canada Goose: This species became scarce in southern Louisiana during the last three decades (Lowery 1974). Therefore, the relatively large numbers detected on this census were unprecedented but reflected the unusually large numbers recorded in winter 1987-88 in southwestern Louisiana as a whole (Robert Helm, in litt.; pers. obs.; Muth 1988). We also found high numbers in the region in the 1988-89 and 1989-90

winters. Most individuals seen were of small subspecies, probably *B. c. hutchinsii*.

Ross' Goose: This species was known previously from Louisiana from only about 10 records. However, as with the Canada Goose, southwestern Louisiana witnessed a major invasion of Ross' Geese in winter 1987-88 (Muth 1988). We also found high numbers in the region in the 1988-89 (Muth 1989) and 1989-90 winters, with 44 counted on the 1988 Crowley CBC and 72 on the 1989 CBC. Although these populations might have been overlooked in the past, we concur with Muth's (1989) opinion that these large numbers reflect a recent increase in the rate of invasion of southwestern Louisiana, which began in the 1960's (Prevett and MacInnes 1972). The Ross' Goose has expanded its breeding, migration, and wintering ranges eastward dramatically over the last three decades (Dzubin 1965, Prevett and Johnson 1977, Frederick and Johnson 1983, Stutheit 1988).

Cinnamon Teal: This species is rare in Louisiana. The male recorded on the census represents the first record for Vermilion Parish. Because it was associating with migrant Blue-winged Teal, we suspect that it was a spring migrant rather than a wintering individual.

Peregrine Falcon: This species is rare

inland in Louisiana in winter. The immature recorded on the census is the first individual that we have recorded there in winter and is the first record for Jefferson Davis Parish. Single birds were found on both the 1988 and 1989 Crowley CBCs.

Black-bellied Plover: Until recently, this species was not known to winter inland in Louisiana. The census, however, reflected what we had recently learned from previous fieldwork in the region, namely that small numbers winter inland in southwestern Louisiana. The 1988 Crowley CBC recorded 147 individuals and the 1989 CBC, 85 individuals, mostly in Area 3.

Semipalmated Plover: There were no previous inland records for this species in winter in Louisiana. Although Muth (1988) implied that our record pertained to an early migrant, we believe that this bird was a wintering individual because our fieldwork in the region, particularly KVR's intensive censuses in Area 3, indicates that spring migrants do not appear in the rice-growing areas before April 6.

Black-necked Stilt: This species' winter status has changed dramatically in the last two decades. Although our census tallied 187 individuals, as recently as the early 1970s, this species was considered rare anywhere in Louisiana in winter

(Lowery 1974). Only from 1973 on was it recorded annually in small numbers on the Sabine NWR CBC in coastal Cameron Parish; 300-400 are now recorded there annually. Although historical data are not available, we assume that wintering in the rice-growing region is also a recent phenomenon. The Crowley CBC recorded 293 individuals in 1988 and 190 in 1989.

Wilson's Phalarope: This species does not normally winter north of southern South America (AOU 1983). The individual recorded on our census was found about 6 1/2 miles west of Thornwell, Jefferson Davis Par., by D. Dittmann and collected by SWC (LSUMZ 135198; ovary 6 x 4 mm, ova minute, bursa 9 x 6 mm; 59.5 g; light fat; active body and remige molt, suspended tail molt, traces of juvenal plumage still present). The only other winter record for Louisiana documented by a specimen (LSUMZ 134710) was collected on 21 December 1986 by SWC at Hackberry Ridge, 2 1/2 miles WSW of Johnsons Bayou School, Cameron Parish. (A report of two near Lafayette on 24 and 26 December 1969 [in Lowery 1974] is not described in sufficient detail to rule out other phalarope species.) Additionally, one was seen on 29 January 1989 in Vermilion Par. (Muth 1989) in Area 3; possibly the same individual was seen nearby in early February (D. Pashley, pers. comm.) and 11 March (KVR), when still in winter plumage.

Stilt Sandpiper: This species is generally considered casual in winter north of South America (AOU 1983). Lowery (1974) considered the species to be rare in Louisiana after 30 October and noted only one record between 28 November and 7 March. Our recent fieldwork, however, has revealed that this species winters regularly in small numbers in Cameron Parish, extreme southwestern coastal Louisiana. Since 1974, Stilt Sandpipers have been recorded at least 12 times there from 26 November to 2 February, including 13 specimens (LSUMZ) collected from this period by SWC between 1983 and 1986, and one flock present for an extended period (22 December to 2 February 1986; Muth 1986). Most specimens were in basic plumage with varying amounts of head and body molt, and little fat. We believe that the above evidence confirms that at least some of these individuals were overwintering individuals rather than late fall or very early spring migrants. Furthermore, our fieldwork in the rice-growing region from 10 December 1987 to 21 February 1988 produced records of 121 individuals from at least 8 localities, with some birds seen in the same areas repeatedly through the winter (Muth 1986); the Crowley CBC recorded 23 individuals in 1988 and five in 1989. Additionally, one was found in Lafayette Par. on 22 February 1987 (Muth 1987), and small groups were seen by others in the study area in winter 1988-89 to at least 13 February (Muth 1989).

Flocks have been reported recently in mid-winter from Alabama (Muth 1989) and southern Texas (Lasley and Sexton 1989).

Laughing Gull: This species has been considered extremely rare in winter inland in Louisiana. However, our census shows that small numbers winter regularly in the region. Other visits to the region produced nine individuals on seven February 1988, four on 9 February 1988, and 51 on 26 February 1989; the 1988 Crowley CBC recorded seven individuals (KVR, all from Area 3). KVR's censuses in Area 3 have revealed that larger numbers occur in the region in spring and that a few are present in summer; curiously, however, none has been found in January.

Gull-billed Tern: This species was not known to winter inland in Louisiana. Our census, however, shows that small numbers winter in the region. Furthermore, our fieldwork in the area in December 1987, January-February 1988, and February 1989 tallied 11 individuals on four trips, and the Crowley CBC recorded one in 1988 and 13 in 1989.

Horned Lark: Although this species is generally scarce in southern Louisiana, the Crowley CBC recorded 91 individuals in 1988 and 48 in 1989. Recent evidence on breeding in our region (pair with gonads in reproductive condition, collected [LSUMZ 127352-53] on 30 March 1986 by SWC 5 miles south of Crowley, Acadia Par.)

suggests that it is possible that the small number of birds recorded on our census (groups of three and four, in Acadia Parish) might be members of resident, rather than wintering, populations.

American Crow and Fish Crow: The low numbers of crows recorded on our census reflects their perplexing year-round scarcity in this region. The expanses of open fields bordered by woodlands would seem to be "ideal" habitat for crows. One or both species is usually abundant in agricultural areas elsewhere in Louisiana.

American Robin: The high numbers on our census reflected the far-above-average numbers in southern Louisiana in winter 1987-88 (Muth 1988). The vast "lawn" at the Jennings Airport alone had 2600 birds. American Robins were also abundant in the 1989-90 winter; the Crowley CBC recorded 6893 individuals.

Western Meadowlark: The records from our census are the first for their respective parishes: (1) Lafayette: KVR tape-recorded one singing individual 5 miles south of Duson; (2) Acadia: KVR collected a singing male (LSUMZ 135194) and tape-recorded another about 15 miles south of Crowley; and (3) Jefferson Davis: SWC collected a calling male (LSUMZ 135197) about 3 miles southwest of Thornwell. KVR also found a singing bird in Lafayette Par., 4 miles south of Duson (Area 4) on 4 November 1988, and

D. Dittmann found one on the 1988 Crowley CBC.

Boat-tailed Grackle: The status of this species inland is not clear. We have recorded it regularly in large numbers in winter in the region, e.g., 6500 in Vermilion and Acadia parishes on 10 December 1987 (SWC, D. Dittmann), 2800 in Area 3 on the 1989 Crowley CBC, 500 in Acadia Par. on 16 January 1988 (JVR, J. M. Bates, and P. E. Scott), thousands coming to evening roost along Hwy. 14 in Jefferson Davis Par. on 12 February 1989 (KVR), and 500 in Acadia Par. 2 miles south of Mermentau on 7 March 1988 (KVR). However, the 1988 Crowley CBC recorded only 25 individuals (as well as 157 Boat-tailed/Great-tailed grackles), and our census total (291) was also low. KVR's census data from the region show that Boat-taileds leave by the end of March, when numbers of Great-taileds arrive to breed.

East-west differences within the region

The low number of species and individuals in Area 4 was due to its smaller area and the brief census time there. If bird species characteristic of brush and woodland are eliminated, the number of individual birds/species/party-mile in Area 4 does not differ significantly (Friedman's Test, $P < 0.005$) from numbers in the other three areas.

J. La. Ornith.

Some species were more than twice as common (individuals/party-mile) in the western half (Areas 1 and 2) than the eastern half (3 and 4) of the region: Pied-billed Grebe, Snowy Egret, Northern Shoveler, American Kestrel, Mourning Dove, Common Yellowthroat, and Boat-tailed Grackle. Other species were more than twice as common in the eastern half: Great Egret, Blue-winged Teal, Killdeer, Greater Yellowlegs, Lesser Yellowlegs, Common Snipe, Ring-billed Gull, Forster's Tern, Water Pipit, Eastern Meadowlark, and Common Grackle. The presence of Am. White Pelican and Mottled Duck only in Area 1 presumably reflects that area's close proximity to coastal marshes.

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Hooded Oriole (*Icterus cucullatus*) Holleyman Migratory Bird Sanctuary, Peveto Beach, Cameron Parish, LA on 20 April 1987. Top photograph by Howard Kisner, bottom photograph by the authors.

J. La. Ornith.

FIRST LOUISIANA AND EASTERMOST UNITED STATES RECORD OF HOODED ORIOLE (*Icterus cucullatus*)

Steven W. Cardiff, *Museum of Natural Science, Louisiana State University, Baton Rouge, LA 70803*

Diane E. Loria and Wang Yong, *Department of Biological Sciences, University of Southern Mississippi, Hattiesburg, MS 39406*

On 20 April 1987, during routine general mist-netting associated with studies of stopover biology of trans-gulf neotropical migrants at the Baton Rouge Audubon Society's Holleyman Migratory Bird Sanctuary, one mile east of Johnsons Bayou, Cameron Parish, Louisiana, Loria and Yong were surprised to discover a Hooded Oriole (*Icterus cucullatus*) in one of the nets. The bird was an adult male by plumage, weighing 27.5 grams and having a wing chord of 83.1 mm. It was banded (USF&WS band No. 862-69520), photographed in the hand by Loria and Howard Kisner (see Imhof 1987; photographs on file with the Louisiana Ornithological Society's Bird Records Committee (LBRC) at the Louisiana State University Museum of Natural Science (LSUMNS), Record #87-24), and released 45 minutes after capture. The bird was not recaptured or seen again, despite continuous netting and fairly heavy coverage of the area by the authors and numerous birders over the next several days. The capture site was in the interior understory of a relatively small isolated patch of coastal hackberry/live oak-dominated "chenier"

woods adjacent to Gulf Coast beach. This record coincided with a pattern of westerly and southwesterly airflow that dominated much of April 1987 and was believed to have been a factor in the appearance in southwestern Louisiana of unusually high numbers of several species that normally migrate farther west, including Swainson's Hawk, Franklin's Gull, Lesser Nighthawk, and Yellow-headed Blackbird (Imhof 1987).

This is the first documented occurrence of Hooded Oriole in Louisiana, and has been accepted by the LBRC; it establishes the easternmost record for the United States. The previous easternmost record was of a bird seen and photographed on 22-23 April 1978 in Chambers Co., Texas (Webster, 1978; Texas Photo Record File No. 130, Texas A&M Univ.). The nearest breeding localities are approximately 250 mi. southwest. The species breeds from northern coastal and central California, southern Nevada, southwestern Utah, central Arizona, southern New Mexico, and western and southern Texas, south to southern Mexico (AOU 1983). United States populations winter in Mexico, except for occasional individuals in coastal

California (casually north to west-central Oregon), southern Arizona, and southern Texas (Oberholser 1974, Garrett and Dunn 1980, AOU 1983). Limited northward range expansion has taken place in recent decades (AOU 1957, 1983; Oberholser 1974; Williams 1976; Roberson 1980, Evens 1981, Webster 1982, Campbell 1985a, 1985b, 1986), even though the species has declined in some parts of its range due to habitat loss, pesticides, and cowbird parasitism (Oberholser 1974, Webster 1982, Williams 1984, Lasley and Sexton 1988, but see Lasley and Sexton 1984, 1986a, 1986b, 1987, 1989). The present record is from an area of extreme southwestern Louisiana that has become famous for yielding records of "western" vagrants, including Blue Bunting (Cardiff and Remsen 1981) and Tropical Parula (Muth *et al.*, in litt.).

All other extralimital records of Hooded Oriole are of wintering individuals in coastal Oregon (Crowell and Nehls 1977, Mattocks 1979, Hunn and Mattocks 1980, Mattocks and Hunn 1980, 1983a, 1983b), or of presumed overshooting spring migrants found north or northeast of the breeding range during spring and probably associated with the above-mentioned pattern of gradual northward expansion of the breeding range. All extralimital records of spring migrants have been within about 450 mi. of the northern edge of the known breeding distribution (Oberholser 1974, Webster 1978, Fix 1984,

Mattocks 1986, Rogers 1987, 1988). There are apparently no documented extralimital records that deviate from these patterns. A previously accepted report of a bird found dead in Finney Co., Kansas, in August 1939 (Lincoln 1940, AOU 1957; identified as *I. c. nelsoni*, banded the previous January at Los Angeles, California), is now considered questionable (Richard F. Johnston, pers. comm.) and was not included in the 6th edition of the AOU Check-list (AOU 1983) or in DeSante and Pyle (1989).

Up to ten subspecies have been recognized, with some variation being clinal (Ridgway 1902, AOU 1957, Peters 1968). Although we were unable to determine reliably the subspecies of the Louisiana bird without a specimen, the relatively short wing-chord measurement suggests the subspecies *sennetti*; *cucullatus* and *nelsoni* are larger (Ridgway 1902, Oberholser 1974; the wing chord measurement of the live bird, however, may not be comparable to measurements of prepared specimens). Somewhat reinforcing this conclusion, comparisons (by Cardiff) of the Louisiana bird's plumage from the photographs with specimens at LSUMNS indicate that the bird is probably not of the northwestern subspecies *nelsoni* because of the deeper orange (less yellowish) color of its head and underparts, and the more extensively black lores. An individual of *I. c. sennetti* would probably be more