

LOUISIANA ORNITHOLOGY

VOLUME 4, NO. 2 WINTER 1998

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The *Journal of Louisiana Ornithology* is mailed free to members of the Louisiana Ornithological Society. Subscription rate for non-members is \$10.00 domestic, \$11.00 foreign. Single issue cost is \$6.00.

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J. V. Remsen, Jr., Museum of Natural Science, Louisiana State University, Baton Rouge, Louisiana 70803.

Journal of Louisiana Ornithology

Volume 4 Number 2, Winter 1998

Published by

THE LOUISIANA ORNITHOLOGICAL SOCIETY

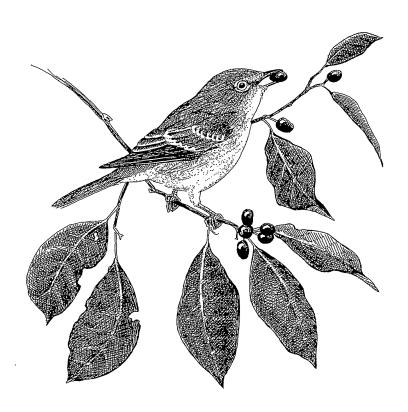
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Volume 4, Number 2

Winter 1998

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D.L. Oittmann gp

A SURVEY OF BIRD FRUGIVORY IN LOUISIANA

William R. Fontenot Lafayette Natural History Museum, 637 Girard Park Dr., Lafayette, LA 70503

Although no North American bird species (north of Mexico) are purely frugivorous (Wheelwright 1988), a substantial number of species routinely include fruits in their diets. Skeate (1985), for example, reported over half of the passerine species detected in a Florida hammock forest to be at least partially frugivorous. Moreover, an amazingly high percentage of primarily insectivorous (i.e. flycatchers, vireos, and warblers) and granivorous (i.e. sparrows, finches) birds eat fruit at certain times of the year, predominately during the fall and winter months. Throughout all of the U.S. and Canada, the percentage of fruit-foraging bird species is higher in the southern U.S. than in any other region (Willson 1986), although only a few studies of avian frugivory have been undertaken there (Beal and Kalmbach 1927, Martin, et al. 1951, and Skeate 1985). To this date, no frugivory studies have ever been published on birds in Louisiana (J.V. Remsen, Jr.; W. C. Barrow; pers. comm.).

To this end, an avian frugivory survey was conducted in Louisiana with two objectives in mind. First, the data presented herein will hopefully provide preliminary baseline information from which more detailed avian frugivory studies may be launched. Second, as presented herein, these data should prove valuable to wildlife managers, other property managers, and even smaller-scaled private landowners who seek to attract and conserve wild birds.

Methods

A survey of field-observed bird/fruit interactions in Louisiana was initiated in January 1994 and completed in October 1998. A total of at least (all same-species multi-individual feeding episodes observed were recorded as "one interaction") 1041 bird/fruit interactions involving 20 families, 46 genera, and 67 species of birds; and 28 families, 44 genera, and approximately 50 species of plants (native, naturalized, and exotic species/cultivars included) were reported by 26 field observers. A total of 325 individual bird species/fruit species pairings were recorded.

Botanists often use the term "fruit" in a general sense to denote sexually generated propagules of many types. However, in this study, as with the

majority of avian frugivory studies cited herein, the term "fruit" is used in the ecological sense: "a fleshy, nutritious, edible pulp surrounding or attached to seed(s), or in which seeds are embedded" (Willson 1986; see also Snow 1971, and Thompson and Willson 1979). In this study, professional biologists, ornithologists, and naturalists in Louisiana recorded the date, location, bird species, and plant species involved in each observed bird-fruit interaction which resulted in the bird(s) actually consuming the fruit(s). Observers disregarded any bird-fruit interaction (i.e. simply "mouthing") that did not result in actual fruit consumption. Observations were recorded on a year-round basis. For a variety of reasons, no real effort was made to quantify specific bird-fruit relationships, other than placing a simple (+) (modifying Martin, et al. 1951) before selected fruit species which were observed to be consumed by an individual bird species on more than 20 occasions during the survey period. Also, no effort was made to segregate bird species with regard to their value as seed-dispersers (i.e. "seed predators" vs. "nectar predators" vs. actual seed dispersers) as is often done on evolutionarily based frugivory studies, for this aspect was not the focus of this survey.

Results are presented by bird species and then by plant species. Involved bird species are presented first, followed by the plant species that each bird was observed to consume, and then by the date or range of dates during which the observations were made. To present as complete of a picture of avian frugivory within our region as possible, additional information from selected studies in other parts of the southeastern (and occasionally, the northeastern) U.S. have been included after the observed data, under the heading of "literature". In such cases, data were selected for inclusion on the basis of a) whether the bird species in question is present in Louisiana during appropriate seasons, and b) whether the reported plant species is present and fruiting in Louisiana during the same period that the bird species is present. In the next section, involved plant species are highlighted, along with the number of bird species which were observed using the plant (under "observed"), and then by the number of additional pertinent bird species from supplemental literature (under "literature") which were reported to use the plant. Plant taxonomy, including English names, follows Thomas and Allen (1993, 1996; where applicable) and Kartez (1994). Bird nomenclature follows the American Ornithologist's Union (1998).

Results

COLUMBIDAE

Mourning Dove (Zenaida macroura) - Current Louisiana Status: Common

year-round resident; local population augmented by birds from northerly regions in fall and winter. **Observed**: southern magnolia (03 Oct; possibly for its seed only). **Literature**: Martin, et al (1951; southeastern U.S.) - pokeweed; Seidenberg (1995) - huckleberry, serviceberry.

TROCHILIDAE

Ruby-throated Hummingbird (*Archilochus colubris*) - Current Louisiana Status: Common breeding resident; common to abundant spring and fall transient; occasional in winter in southern Louisiana. **Observed**: common persimmon (18 Nov; nectaring from holes in fruit previously made by other birds).

PICIDAE

Red-headed Woodpecker (Melanerpes erythrocephalus) - Current Louisiana Status: Locally common year- round resident. Observed: black cherry (21 Apr). Literature: Beal (1911) - sumac sp., poison ivy, elderberry, rough-leaf dogwood, flowering dogwood, mulberry sp., black gum, catbrier sp., Virginia creeper, wild grape sp.

Red-bellied Woodpecker (Melanerpes carolinus) - Current Louisiana status: Common year round resident. Observed: poison ivy (01 Jan), elderberry (09 Oct), southern magnolia (29 Aug), black gum (08 Oct), black cherry (07 Apr, 8-28 May), hackberry (29 Dec), peppervine (20 Sep), Virginia creeper (07 Oct, 24 Nov). Literature: Beal (1911) - palmetto sp., sumac sp., American holly, deciduous holly, rough-leaf dogwood, flowering dogwood, huckleberry sp., catbrier sp., sassafras, mulberry sp., wax myrtle, pokeweed, wild grape sp.

Yellow-bellied Sapsucker (Sphyrapicus varius) - Current Louisiana Status: Common winter resident. Observed: (+)poison ivy (16 Oct-24 Feb), southern magnolia (07 Nov), black gum (Nov?), supplejack (08 Dec), hackberry (29 Dec, 09 Jan), Virginia creeper (16, 22 Nov). Literature: Beal (1911) - poison sumac, American holly, inkberry holly, deciduous holly, elderberry, strawberry bush, flowering dogwood, red cedar, sassafras, pokeweed, catbrier sp.

Downy Woodpecker (*Picoides pubescens*) - Current Louisiana Status: Common year-round resident. **Observed**: poison ivy (01, 10 Jan), black gum (08 Oct), Virginia creeper (16 Oct). **Literature**: Beal (1911) - elderberry, rough-leaf dogwood, flowering dogwood, blueberry sp., wax myrtle, pokeweed, service berry, blackberry sp.

Hairy Woodpecker (*Picoides villosus*) - Current Louisiana Status: Common year-round resident. **Observed**: black gum (08 Oct).

Northern (Yellow-shafted) Flicker (Colaptes auratus) - Current Louisiana Status: Fairly common to uncommon breeder; local population augmented by large numbers from northerly regions in fall and winter. Observed: poison ivy (07 Dec, 15 Jan), Virginia creeper (16 Oct). Literature: Beal (1911) - sumac sp., holly sp., elderberry, rough-leaf dogwood, flowering dogwood, red cedar, huckleberry sp., blueberry sp., spicebush, wax myrtle, red mulberry, southern magnolia, tupelo gum, black gum, pokeweed, black cherry, blackberry sp., catbrier sp., hackberry; Fontenot (1992) hackberry, serviceberry; Rybczynski and Riker (1981) - arrowwood viburnum.

Pileated Woodpecker (*Dryocopus pileatus*) - Current Louisiana Status: Locally common year-round resident. **Observed**: poison ivy (12 Oct), black gum (08 Oct), black cherry (17 Jun). **Literature**: Beal (1911) - dwarf sumac, poison sumac, American holly, dahoon holly, elderberry, Viburnum sp., roughleaf dogwood, flowering dogwood, common persimmon, sassafras, tupelo gum, fringe tree blackberry sp., catbrier sp., hackberry, Virginia creeper, wild grape sp.; Martin, et al (1951) - palmetto.

TYRANNIDAE

Eastern Wood Pewee (Contopus virens) - Current Louisiana status: Fairly common breeding resident north and central; common transient statewide. Observed: prickly ash (10 Aug). Literature: Beal (1912) - poison ivy, elderberry, rough-leaf dogwood, blueberry sp., pokeweed, blackberry sp.

Acadian Flycatcher (*Empidonax virescens*) - Current Louisiana Status: Common breeding resident. **Observed:** rough-leaf dogwood (02-09 Sep), elderberry (25 Jul). **Literature**: Beal (1912) - blackberry sp.

Alder Flycatcher (*Empidonax alnorum*) - Current Louisiana Status: Uncommon spring/fall transient. **Observed**: rough-leaf dogwood (22 Aug). **Literature**: see Beal (1912) under *Empidonax traillii*.

Willow Flycatcher (*Empidonax traillii*) - Current Louisiana Status: Casual breeder; rare spring/fall transient. **Observed**: rough-leaf dogwood (23 Aug), prickly ash (23 Aug). **Literature**: Beal (1912; 12 states) - elderberry, red cedar.

Eastern Phoebe (Sayornis phoebe) - Current Louisiana Status: Local breeder (northwestern); common winter resident. **Observed**: poison ivy (11 Oct), Carolina moonseed (03 Nov, 02 Dec). **Literature**: Beal (1912) -dwarf sumac, poison sumac, dahoon holly, elderberry, arrowwood viburnum, roughleaf dogwood, red cedar, common persimmon, sassafras, wax myrtle, pokeweed, catbrier sp., hackberry, Virginia creeper.

Ash-throated Flycatcher (*Myiarchus cinerascens*) - Current Louisiana Status: Rare fall/winter vagrant. **Observed**: Chinese privet (29 Dec), wax-leaf ligustrum (14 Dec), catbrier (17 Jan), bird pepper (04 Dec), hackberry (17 Jan). **Literature**: Beal (1912) - elderberry.

Great Crested Flycatcher (Myiarchus crinitus) - Current Louisiana Status: Common breeding resident; common spring and fall transient. **Observed:** elderberry (08 Oct), prickly ash (10-20 Aug), hackberry (04 Sept). **Literature**: Beal (1912) - rough-leaf dogwood, huckleberry sp., blueberry sp., mulberry sp., sassafras, spicebush, pokeweed, black cherry, blackberry sp., Virginia creeper, wild grape sp.

Cassin's/Tropical/Couch's Kingbird (*Tyrannus vociferans/melancholicus/couchii*) - Current Louisiana Status: Occasional vagrant, fall through spring. **Observed**: chinaberry (involving several interactions by two birds [not identified to species]; observed in Orleans parish, 26 Dec 1994). **Literature**: Beal (1912; *T. vociferans*) - elderberry, wild grape sp.

Eastern Kingbird (*Tyrannus tyrannus*) - Current Louisiana Status: Common breeding resident; very common to abundant spring and fall transient. **Observed**: elderberry (27 Aug-09 Sep), rough-leaf dogwood (22 Aug), southern magnolia (10 Sep-08 Oct), red mulberry (21-23 Apr), Japanese yew (10 Sep), black cherry (23 Apr), prickly ash (10 Aug), Virginia creeper (27 Aug). **Literature**: Beal (1912) -sumac sp., huckleberry sp., blueberry sp., spicebush, sassafras, pokeweed, service berry sp., chokeberry, blackberry sp., wild grape sp.

VIREONIDAE

White-eyed Vireo (Vireo griseus) - Current Louisiana Status: Common breeding resident; uncommon winter resident (south Louisiana). **Observed**: poison ivy (20 Sep-16 Oct), Japanese honeysuckle (05 Jan), spicebush (14 Oct), Chinese privet (05 Jan), supplejack (23 Sep), prickly ash (19 Aug), Virginia creeper (23 Sep). **Literature**: Chapin (1925) - sumac sp., dogwood sp., wax

myrtle, wild grape sp. Martin (1951) - holly sp., elderberry, sassafras, black-berry sp.

Blue-headed Vireo (*Vireo solitarius*) - Current Louisiana Status: Common winter resident. **Observed**: poison ivy (14 Dec), catbrier sp (10 Jan), wild grape sp (12 Nov). **Literature**: Chapin (1925) - *Viburnum sp.*, dogwood sp., wax myrtle.

Philadelphia Vireo (Vireo philadelphicus) - Current Louisiana Status: Uncommon spring and fall transient. **Observed**: spicebush (02 Oct), prickly ash (18-25 Aug), Virginia creeper (13-16 Oct). **Literature**: Chapin (1925) - dogwood sp., wax myrtle, wild grape sp. Rybczynski and Riker (1981) - arrowwood viburnum.

Red-eyed Vireo (Vireo olivaceus) - Current Louisiana Status: Common breeding resident; common to locally abundant spring and fall transient. Observed: rough-leaf dogwood (12-20 Sep), southern magnolia (13-20 Sep), red mulberry (21-23 Apr), black cherry (20 Mar), hackberry (13 Sep), prickly ash (28 Jul-20 Aug), American beautyberry (07 Oct), Virginia creeper (07 Oct). Literature: Chapin (1925) -blueberry sp., spicebush, red bay, sassafras, white mulberry, blackberry sp., Virginia creeper, wild grape sp.; Martin, et al (1951) - elderberry, magnolia sp., black gum; Rybczynski and Riker (1981) - arrowwood viburnum.

CORVIDAE

Blue Jay (*Cyanocitta cristata*) - Current Louisiana Status: Abundant year-round resident. **Observed**: elderberry (09 Sep), common persimmon (18 Nov), wild grape (11 Oct). **Literature**: Beal (1896) - elderberry, huckleberry sp., blueberry sp., black gum, pokeweed, chokeberry, hawthorn sp., black cherry, blackberry sp.; Fontenot (1992) - serviceberry, hackberry.

American Crow (Corvus brachyrhynchos) - Current Louisiana Status: Common year-round resident; less common in coastal parishes. Observed: black cherry (14 Jun), Virginia creeper (10 Oct). Literature: Beal (1927; southeast U.S.) - sumac sp., black gum, pokeweed, catbrier sp., blackberry sp.

Fish Crow (*Corvus ossifragus*) - Current Louisiana Status: Common year-round resident in central and south; less common in north. **Observed**: common persimmon (18 Nov), Virginia creeper (18 Oct).

HIRUNDINIDAE

Tree Swallow (Tachycineta *bicolor)* - Current Louisiana Status: Common spring, fall, and winter resident. **Observed**: wax myrtle (Dec-Jan). **Literature**: Beal (1918) - "small amounts" of dogwood sp., eastern red cedar, Virginia creeper.

PARIDAE

Tufted Titmouse (*Baeolophus bicolor*) - Current Louisiana Status: Common year-round resident (rare in coastal parishes). **Observed**: poison ivy (28 Jan), hackberry (14 Oct). **Literature**: Beal (1927) - sumac sp., elderberry, huckleberry sp., blueberry sp., mulberry sp., wax myrtle, blackberry sp.

Carolina Chickadee (*Poecile carolinensis*) - Current Louisiana Status: Common year-round resident (rare in coastal parishes). **Observed**: poison ivy (20 Sep-12 Dec), hackberry (16 Oct), wild grape sp (06 Sep). **Literature**: Beal (1927) - blueberry sp., blackberry sp.

REGULIDAE

Ruby-crowned Kinglet (*Regulus calendula*) - Current Louisiana Status: Common winter resident. **Observed**: poison ivy (04, 15 Nov, 08-09 Jan), wax myrtle (23 Dec), American beautyberry (16 Nov). **Literature**: Martin, et al (1951; California) - elderberry sp.

TURDIDAE

Eastern Bluebird (Sialia sialis) - Current Louisiana Status: Common year round resident (rare in coastal parishes). Observed: (+)dwarf sumac (Aug-Oct), poison ivy (16 Oct, 18 Dec), elderberry (23 Nov), rough-leaf dogwood (19 Sep), mistletoe (28 Dec), supplejack (08 Dec), (+)hackberry 16 Oct-05 Jan), Virginia creeper (14 Oct). Literature: Beal (1915a) -deciduous holly, arrowwood viburnum, strawberry bush, flowering dogwood, red cedar, common persimmon, blueberry sp., mulberry sp., wax myrtle, red bay, black gum, pokeweed, hawthorn sp., black cherry, blackberry sp. catbrier sp.; Fontenot (1992) - serviceberry; Seidenberg (1995) - chokeberry.

Mountain Bluebird (*Sialia currucoides*) - Current Louisiana Status: Occasional late-winter vagrant. **Observed**: hackberry (Jan).

Veery (*Catharus fuscescens*) - Current Louisiana Status: Fairly common spring and fall transient. **Observed**: elderberry (14 Oct), spicebush (14 Oct), peppervine (13 Sep), Virginia creeper (3-7 Oct). **Literature**: Beal (1915b) - dwarf sumac, rough-leaf dogwood, huckleberry sp., black gum, pokeweed, yew sp., service berry, crab apple, black cherry, catbrier sp.

Gray-cheeked Thrush (Catharus minimus) - Current Louisiana Status: Fairly common spring and fall transient. Observed: elderberry (16 Oct), spicebush (03, 16 Oct), red mulberry (30 Apr). Literature: Beal (1915b) - arrowwood viburnum, rough-leaf dogwood, flowering dogwood, wax myrtle, black gum, pokeweed, crabapple, black cherry, catbrier sp., wild grape sp.

Swainson's Thrush (Catharus ustulatus) - Current Louisiana Status: Fairly common spring and fall transient. Observed: poison ivy (20 Sep), American beautyberry (02 Oct), dwarf palmetto (20 Oct), spicebush (16 Sep, 03 Oct), red mulberry (30 Apr), black gum (08 Oct), black cherry (20 May), prickly ash (08 Oct), peppervine (13 Sep), Virginia creeper (3-7 Oct). Literature: Beal (1915b) - sumac sp., elderberry, arrowwood viburnum, flowering dogwood, red cedar, mulberry sp., pokeweed, blackberry sp., catbrier sp., hackberry, wild grape sp.

Hermit Thrush (Catharus guttatus) - Current Louisiana Status: Common winter resident. Observed: dwarf sumac (21, 26 Dec), poison ivy (28 Nov, 06 Dec), dwarf palmetto (Dec), yaupon holly (18 Nov), black gum (08 Oct), Chinese privet (08 Jan, 01 Feb), supplejack (20 Jan), salt-matrimony vine (23 Dec), hackberry (10 Jan, 13 Mar, 02 Dec), Virginia creeper (26 Nov). Literature: Beal (1915b) - American holly, inkberry holly, strawberry bush, roughleaf dogwood, flowering dogwood, red cedar, spicebush, sassafras, wax myrtle, mistletoe, pokeweed, chokeberry, hawthorn sp., catbrier sp., wild grape sp. Rybczynski and Riker (1981) - arrowwood viburnum.

Wood Thrush (Hylocichla mustelina) - Current Louisiana Status: Common to uncommon breeding resident. **Observed**: dwarf palmetto (20 Oct), spicebush (03 Oct), southern magnolia (23 Sep, 04 Oct), black gum (08 Oct), Virginia creeper (3-10 Oct). **Literature**: Beal (1915b) - American beautyberry, elderberry, flowering dogwood, rough-leaf dogwood, huckleberry sp., blueberry sp., mulberry sp., wax myrtle, yew sp., black cherry, blackberry sp.; Rybczynski and Riker (1981) - arrowwood viburnum.

American Robin (*Turdus migratorius*) - Current Louisiana Status: Rare and local breeder; local population abundantly augmented in fall/winter by birds

from northerly regions. **Observed**: poison ivy (25 Feb; 16, 19 Oct), English holly (Jan), Chinese 'Burford' holly (Jan), deciduous holly (17 Jan-06 Feb), yaupon holly (Dec-11 Jan), American beautyberry (28-29 Nov), flowering dogwood (Oct), Southern magnolia (03, 26 Oct), chinaberry (Jan-Feb), (+)Chinese privet (08 Jan-24 Jan), supplejack (01 Nov-18 Jan), Carolina buckthorn (Oct), hawthorn sp. (22 Dec, 02 Jan), (+)hackberry (29 Dec-22 Feb), (+)Virginia creeper (03 Oct, 24-28 Nov), (+)wild grape sp. (16 Oct-12 Nov). **Literature**: Beal (1915a) -dwarf sumac, deciduous holly, American holly, elderberry, arrowwood viburnum, strawberry bush, rough-leaf dogwood, red cedar, common persimmon, huckleberry sp., blueberry sp., spicebush, red bay, mulberry sp., wax myrtle, tupelo gum, black gum, pokeweed, mistletoe, service berry sp., black cherry, blackberry sp., catbrier sp.; Seidenberg (1995) - chokeberry.

MIMIDAE

Gray Catbird (*Dumetella carolinensis*) - Current Louisiana Status: Common breeding resident, north; common to abundant spring/fall transient; uncommon winter resident, south. **Observed**: poison ivy (10, 14 Oct, 04 Dec), dwarf palmetto (17 Oct, Mar), elderberry (09 Oct), (+)American beautyberry (02 Sep-02 Dec), spicebush (03 Oct, 16 Oct), Southern magnolia (09 Oct), red mulberry (21-23 Apr), black gum (12 Oct), pokeweed (28 Sep), black cherry (Apr), West Indian lantana (Sep 09, Oct 08, Dec), (+)Virginia creeper (30 Sep-16 Oct), wild grape sp. (25 Sep, 16 Oct). **Literature**: Fontenot (1992) - sassafras, wax myrtle, service berry; Rybczynski and Riker (1981) - arrowwood viburnum; Seidenberg (1995) - hawthorn.

Northern Mockingbird (*Mimus polyglottos*) - Current Louisiana Status: Common to abundant year-round resident. **Observed**: dwarf sumac (23, 28 Dec), poison ivy (16 Oct, 15 Dec), dwarf palmetto (17 Oct), English holly (Jan), Savannah holly (06 Dec), American beautyberry (13, 20 Oct), trumpet honeysuckle (12 Dec), elderberry (21 Aug-23 Nov), rough-leaf dogwood (29 Sep), flowering dogwood (26 Nov), common persimmon (18 Nov), spicebush (08-14 Oct, 04 Dec), southern magnolia (Sep), chinaberry (20 Dec, Jan-Feb), Carolina moonseed (14 Dec), black gum (12 Oct), pokeweed (21 Aug), mistletoe (21 Dec), Carolina buckthorn (29 Sep), fire thorn (Dec), firebush (28 Dec), bird pepper (04 Dec), (+) hackberry (24 Sep, 14 Oct-25 Feb, 07 Mar), West Indian lantana (29 Sep, 02 Oct), (+) Virginia creeper (Oct, 01 Dec), wild grape sp. (11 Oct, 07 Dec) **Literature**: Beal (1927) - mulberry sp., blackberry sp., catbrier sp.; Fontenot (1992) - sassafras, service berry; Seidenberg (1995) - hawthorn.

Sage Thrasher (*Oreoscoptes montanus*) - Current Louisiana Status: Occasional vagrant; primarily in fall/winter. **Observed**: hackberry (involving several interactions by one bird; 21-22 Dec 1996, Cameron parish). **Literature**: Martin, et al (1951) - wild grape sp.

Brown Thrasher (*Toxostoma rufum*) - Current Louisiana Status: Common year-round resident. **Observed**: poison ivy (03 Dec), dwarf palmetto (20 Oct), American beautyberry (13 Oct), elderberry (29 Jul-23 Nov), rough-leaf dogwood (14 Sep), spicebush (03 Oct), Carolina moonseed (17 Dec), black gum (08, 12 Oct), pokeweed (20-21 Aug), hackberry (29 Jan, 06 Mar, 01 Dec), pepper vine (24 Sep), Virginia creeper (02 Oct, 28 Nov). **Literature**: Beal (1927) - holly sp., huckleberry sp., blueberry sp.; Fontenot (1992) - sassafras, mulberry sp.

STURNIDAE

European Starling (*Sturnus vulgaris*) - Current Louisiana Status: Abundant year-round. **Observed**: elderberry (12 Dec), black cherry (Apr), hackberry (29 Dec, 01, 09 Jan, Feb), (+)Virginia creeper (22 Oct, 06, 28 Nov).

BOMBYCILLIDAE

Cedar Waxwing (Bombycilla cedrorum) - Current Louisiana Status: Common winter resident. Observed: poison ivy (18 Jan-14 Feb), English holly (Jan), deciduous holly (11 Mar), yaupon holly (06 Dec, 27 Feb), American beautyberry (28 Nov), flowering dogwood (Nov), Carolina moonseed (14 Dec), (+) red mulberry (Apr), black gum (12 Oct), (+) Chinese privet (08 Jan-14 Feb), mistletoe (21 Dec-14 Feb), supplejack (05 Jan), Photinia sp. (27 Feb), (+) black cherry (Apr), catbrier sp. (28 Dec), (+) hackberry (15 Dec-25 Feb, 27 Mar), wild grape sp. (28 Dec). Literature: Fontenot (1992) - common persimmon; Seidenberg (1995) - chokeberry.

PARULIDAE

Orange-crowned Warbler (*Vermivora celata*) - Current Louisiana Status: Common winter resident. **Observed**: camphor tree (23 Dec), supplejack (07 Dec).

Tropical Parula (*Parula pitiayumi*) - Current Louisiana Status: Occasional winter vagrant. **Observed**: camphor tree (23 Dec 1995; Vermilion parish).

J. La. Ornith.

Magnolia Warbler (*Dendroica magnolia*) - Current Louisiana Status: Common spring and fall migrant. **Observed**: hackberry (27 Aug).

Yellow-rumped (Myrtle) Warbler (Dendroica coronata) - Current Louisiana Status: Abundant winter resident. Observed: (+)poison ivy (03 Nov-21 Feb), camphor tree (23 Dec), wax myrtle (19 Nov), Chinese privet (02 Jan), wild grape sp. (15 Nov). Literature: Martin, et al (1951) - palmetto sp., red cedar, common persimmon.

Prothonotary Warbler (*Protonotaria citrea*) - Current Louisiana Status: Common breeding resident. **Observed**: elderberry (12 Aug, 18 Sep).

Yellow-breasted Chat (*Icteria virens*) - Current Louisiana Status: Common breeding resident; occasional in winter in south. **Observed**: elderberry (02 Sep), rough-leaf dogwood (06 Sep), black cherry (28 May), hackberry (06 Aug). **Literature**: Martin, et al (1951) -blueberry sp., pokeweed, blackberry sp.

THRAUPIDAE

Summer Tanager (*Piranga rubra*) - Current Louisiana Status: Common breeding resident; occasional in winter. **Observed**: American beautyberry (04 Sep-Oct), elderberry (Sep, 13 Oct), rough-leaf dogwood (Sep), mulberry sp. (29 Apr), black gum (21 Sep), Japanese yew (10 Sep), black cherry (Jun), hackberry (27 Aug), Virginia creeper (07-18 Oct), wild grape sp. (06 Sep, 10 Oct). **Literature**: Martin, et al (1951) - blackberry sp.

Scarlet Tanager (*Piranga olivacea*) - Current Louisiana Status: Common spring and fall transient. **Observed**: American beautyberry (Oct), red mulberry (21-23 Apr), Virginia creeper (04-18 Oct). **Literature**: Fontenot (1992) - service berry; Martin, et al (1951) - sumac sp., elderberry, dogwood sp., wax myrtle, black gum, blackberry sp., wild grape sp.

EMBERIZIDAE

Spotted Towhee (*Pipilo maculatus*) - Current Louisiana Status: Occasional winter vagrant. **Observed**: hackberry (20 Dec 1997, Cameron parish).

Eastern Towhee (*Pipilo erythrophthalmus*) - Current Louisiana Status: Common year-round resident. **Observed:** Dwarf sumac (23 Dec). **Literature**: Martin, et al (1951) - holly sp., American beautyberry, blueberry sp., magnolia sp., wax myrtle, blackberry sp., hackberry sp., wild grape sp.

White-throated Sparrow (Zonotrichia albicollis) - Current Louisiana Status: Common to abundant winter resident. Observed: (+)poison ivy (12 Nov, 07 Dec-08 Feb), yaupon holly (Jan), American beautyberry (09 Nov), Japanese honeysuckle (24 Dec), flowering dogwood (Dec), Carolina moonseed (24 Dec), wax myrtle (Nov), Chinese privet (30 Dec), hawthorn sp. (22 Dec, 02 Jan), catbrier sp. (05 Jan), hackberry (02, 29 Dec). Literature: Martin, et al (1951) - holly sp., elderberry, wild grape sp. Rybczynski and Riker (1981) - arrowwood viburnum.

White-crowned Sparrow (Zonotrichia leucophrys) - Current Louisiana Status: Uncommon and local winter resident. Observed: elderberry (15 Dec), Chinese privet (29 Dec), salt matrimony vine (26 Dec). Literature: Rybczynski and Riker (1981) - arrowwood viburnum.

Dark-eyed Junco (*Junco hyemalis*) - Current Louisiana Status: Common winter resident. **Observed**: poison ivy (09 Nov), American beautyberry (01 Dec), hackberry (14 Dec).

CARDINALIDAE

Northern Cardinal (Cardinalis cardinalis) - Current Louisiana Status: Abundant year- round resident. Observed: dwarf sumac (29 Jul-23 Dec), poison ivy (23 Sep, 16 Oct, 28 Dec), dwarf palmetto (20 Oct), English holly (Jan), yaupon (Jan), (+)American beautyberry (09 Sep-20 Dec), trumpet honeysuckle (28 Jul), elderberry (16 Jul-28 Sep; 11, 23 Nov), rough-leaf dogwood (06 Sep), flowering dogwood (20 Oct), southern magnolia (08 Oct), fringetree (04 Aug), Chinese privet (Jan), Japanese yew (12 Sep), bird pepper (07 Oct, 15 Nov), poke weed (20 Aug, 09 Dec), Carolina buckthorn (17 Oct), parsley hawthorn (Crataegus marshallii; eating still-green fruit; 15 Oct), prickly ash (18 Aug), hackberry (07 Oct, 07 Dec-30 Jan), pepper vine (22 Aug), Virginia creeper (14, 16 Oct), wild grape sp. (25 Sep-11 Oct). Literature: Beal (1927) - prickly pear cactus, passion vine, service berry, black cherry; Fontenot (1992) - red mulberry.

Rose-breasted Grosbeak (*Pheucticus ludovicianus*) - Current Louisiana Status: Fairly common spring and fall transient. **Observed**: American beautyberry (13 Oct), southern magnolia (Oct), red mulberry (21-23 Apr), loquat (27 Apr), black cherry (Apr), black gum (08 Oct), wild grape sp. (03 Oct). **Literature**: Fontenot (1992) - service berry; McAtee (1908) - elderberry, rough-leaf dogwood, pokeweed, supplejack, hawthorn sp., blackberry sp.

Painted Bunting (*Passerina ciris*) - Current Louisiana Status: Locally common breeding resident; occasional in winter. **Observed**: trumpet honey-suckle (12 Sep).

ICTERIDAE

Rusty Blackbird (*Euphagus carolinus*) - Current Louisiana Status: Fairly common winter resident. **Observed**: hackberry (Jan). **Literature**: Martin, et al (1951) - wild grape sp.; Rybczynski and Riker (1981) - arrowwood viburnum.

Common Grackle (*Quiscalus quiscula*) - Current Louisiana Status: Common year- round resident; abundant in winter. **Observed**: elderberry (29 Jul), common persimmon (07 Dec), red mulberry (21-23 Apr), hackberry (10 Oct, 21 Jan), Virginia creeper (10 Oct). **Literature**: Martin, et al (1951) - blackberry sp.

Orchard Oriole (*Icterus spurius*) - Current Louisiana Status: Common breeding resident. **Observed**: red mulberry (21-23 Apr) wild grape sp. (Sep). **Literature**: Martin, et al (1951) - huckleberry sp., blueberry sp., blackberry sp.

Baltimore Oriole (*Icterus galbula*) - Current Louisiana Status: Locally common breeding resident; occasional in winter. **Observed**: elderberry (12 Sep), common persimmon (18 Nov), red mulberry (21-23 Apr), loquat (27 Apr), wild grape sp. (08 Sep-16 Oct). **Literature**: Martin, et al (1951) - blueberry sp., serviceberry, cherry sp., blackberry sp.

FRINGILLIDAE

Purple Finch (*Carpodacus purpureus*) - Current Louisiana Status: Uncommon to rare winter resident. **Observed**: Japanese honeysuckle (24 Dec), Chinese privet (Jan), supplejack (28 Dec), Carolina buckthorn (29 Dec). **Literature**: Martin, et al (1951) - poison ivy, dogwood sp., red cedar, black gum, wild grape sp.

House Finch (*Carpodacus mexicanus*) - Current Louisiana Status: (currently in flux) Common year- round resident. **Observed**: elderberry (Sep), red cedar (10 Jan), Chinese privet (30 Dec), supplejack (02 Dec), hackberry (02 Dec).

American Goldfinch (*Carduelis tristis*) - Current Louisiana Status: Abundant winter resident. **Observed**: elderberry (23 Nov), Japanese honeysuckle (Jan, 14 Feb), hackberry (Jan).

PASSERIDAE

House Sparrow (*Passer domesticus*) - Current Louisiana Status: Abundant year-round resident. **Observed:** elderberry (Sep), poke weed (12 Dec).

Additional Potential Avian Frugivores for Louisiana (from literature; no observational data collected)

Wild Turkey (Meleagris gallopavo) - Literature: Fontenot (1992) - sassafras; Martin, et al (1951; southeastern U.S.) - poison ivy, holly sp., dogwood sp., greenbrier sp., red bay, black gum, wild grape sp.; Seidenberg (1995) - strawberry bush, huckleberry, common persimmon, supplejack, serviceberry.

Northern Bobwhite (Colinus virginianus) - Literature: Fontenot (1992) - sassafras; Martin, et al (1951; southeastern U.S.) Japanese honeysuckle, flowering dogwood, black gum, blackberry sp.; Seidenberg (1995) - huckleberry, wax myrtle, supplejack, service berry, hawthorn, black cherry.

Warbling Vireo (Vireo gilvus) - Literature: Martin, et al (1951) - sumac sp., poison oak, elderberry, dogwood sp., pokeweed, cherry sp., wild grape sp.

Carolina Wren (*Thryothorus ludoviciana*) - **Literature:** Martin, et al (1951) - poison ivy, wax myrtle.

Pine Warbler (*Dendroica pinus*) - **Literature**: Martin, et al (1951) - sumac sp., flowering dogwood, wild grape sp.

Western Tanager (*Piranga ludoviciana*) - **Literature**: Martin, et al (1951; pacific U.S.) - elderberry sp., mulberry sp., serviceberry sp.

Fox Sparrow (*Passerella iliaca*) - **Literature**: Martin, et al (1951) - poison ivy, hawthorn sp., catbrier sp., Virginia creeper, wild grape sp.

Indigo Bunting (*Passerina cyanea*) - **Literature**: Martin, et al (1951) - elderberry, blackberry sp.

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Eastern Meadowlark (Sturnella magna) - Literature: Martin, et al (1951; southeast U.S.) - wax myrtle, chokeberry.

PLANT SPECIES LIST

Listed below (in family alphabetical order) are important species of native, naturalized, and exotic plants (relative to Louisiana) mentioned in observed and supplementary accounts of bird-fruit use. Figures following "observed" and "literature" reflect number of bird species involved from each. "Dates" reflect approximate time-frame of mature fruit availability in Louisiana.

ANACARDACEAE

Dwarf Sumac (*Rhus copallinum*) - Ubiquitously distributed throughout most regions of Louisiana. Small, colony-forming tree. Smooth sumac (*Rhus glabra*) and poison sumac (*Toxicodendron vernix*) also present (and probably equally important to frugivorous birds) on a slightly more limited basis. **Dates**: late Jul-Dec **Observed**: 6. **Literature** (Sumac sp.): 14.

Poison Ivy (*Toxicodendron radicans*) - Ubiquitously distributed statewide in most all habitats. An extremely important fall/winter food source for many bird species. Poison oak (*Toxicodendron pubescens*) is limited to the northern half of the state, and probably possesses equal food value.

Dates: late Aug-Feb. Observed: 23. Literature: 3.

AQUIFOLIACEAE

English Holly (*Ilex aquifolium*) - Widely planted exotic with food value possibly similar to native species. Other common cultivated hybrid variety exhibiting similar food value includes *Ilex* X *attenuata* 'Fosteri'. **Dates**: Nov-Feb. **Observed**: 5.

Deciduous Holly (*Ilex decidua*) - Damp habitats statewide. Relatively important late winter/early spring food source. **Dates**: Nov-Feb. **Observed**: 3. **Literature**: 4.

Inkberry Holly (*Ilex glabra*) - with gallberry holly (*I. coriacea*) in acidic bogs; western Louisiana and the Florida parishes. Reported in supplementary data. **Dates**: May-Jul. **Literature**: 2.

American Holly (*Ilex opaca*) - Statewide (though rare in coastal parishes). Important winter food. Several cultivars/hybrids in current garden use include 'East Palatka', 'Greenleaf', and *Ilex opaca X cassine* 'Savannah'. **Dates**: late Oct-Feb **Observed**: 2. **Literature**: 11.

Yaupon (*Ilex vomitoria*) - Statewide in moist to dry habitats. Relatively important winter/spring food. **Dates**: Oct-May. **Observed**: 5.

ARECACEAE

Dwarf Palmetto (Sabal minor) - Medium-sized evergreen shrub, widely distributed within swampy habitats throughout the state. Produces decent quantities of black fruits beginning in late fall. Like yaupon holly, catbrier, and some others, dwarf palmetto fruits often persist through the following spring, rendering them available to spring migrants as well as winter residents. **Dates**: Sep-Mar. **Observed**: 7. **Literature** (Includes all palmetto species): 3.

CAPRIFOLIACEAE

Japanese Honeysuckle (*Lonicera japonica*) - Escaped exotic which has invaded many habitats in every parish. **Dates**: Oct-Mar. **Observed**: 4.

Trumpet or Coral Honeysuckle (*Lonicera sempervirens*) - Commonly distributed in drier mixed woodland habitats north of Interstate-10; widely planted statewide. **Dates**: Jul-Oct. **Observed**: 3.

Elderberry (Sambucus canadensis) - Abundantly distributed statewide, especially in disturbed/sunny habitats. Large shrub/small tree. Very high use by wide variety of birds. **Dates**: Aug-Dec. **Observed**: 22. **Literature**: 21.

Arrowwood Viburnum (*Viburnum dentatum*) - Widely distributed in all Louisiana regions except Mississippi River floodplain. Medium to large shrub. Observed frugivory in Louisiana lacking. Other important Louisiana viburnum species include possumhaw viburnum (*V. nudum*) and rusty blackhaw viburnum (*V. rufidulum*), both large shrubs. **Dates**: Aug-Nov. **Literature**: 16.

CELASTRACEAE

Strawberry Bush (*Euonymus americana*) - Fairly common in riparian areas of beech-magnolia forests and other transitional forests. A medium-small,

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stoloniferous shrub that produces juicy fruits late summer/early fall. No observed data during study period (most likely, these fruits are stripped as soon as they ripen). **Dates**: Aug-Sep. **Literature**: 5.

CORNACEAE

Rough-leaf Dogwood (*Cornus drummondii*) - Common to abundant in moist, sunny habitats throughout the state. Small tree; small, whitish, globose fruits. This species, along with its Atlantic coast sibling species, *Cornus asperifolia*, exhibit high usage by many bird genera and species. In Louisiana, *C. drummondii*, along with a blue-fruited sibling species, *C. foemina* (swamp dogwood), are most abundant on alluvial soils. **Dates**: Aug-Oct. **Observed**: 13. **Literature** (includes *C. asperifolia*, a closely related species): 18.

Flowering Dogwood (*Cornus florida*) - Widely distributed in Louisiana, either in wild or cultivated situations. Small to medium tree. Heavily used by birds. **Dates**: Sep-Nov. **Observed**: 5. **Literature** (includes all citations under "dogwood sp."): 14.

CUPRESSACEAE

Eastern Red Cedar (*Juniperus virginiana*) - Widely distributed in Louisiana, especially in circumneutral soils. **Dates**: Nov-Jan. **Observed**: 1. **Literature**: 13.

EBENACEAE

Common Persimmon (*Diospyros virginiana*) - Widely distributed throughout most Louisiana habitats. Primarily mammal-dispersed, but both observed and supplementary data indicate at least some bird use. **Dates**: Oct-Dec. **Observed**: 6. **Literature**: 7.

ERICACEAE

Contains two important genera used by breeding residents throughout the mixed pine/hardwood forests of the Florida parishes, north, and central Louisiana: the blueberries (*Vaccinium*) and the huckleberries (*Gaylussacia*). Unfortunately, no observational data were recorded for either. **Dates**: May-Aug. *Gaylussacia sp.* from literature: 14. *Vaccinium sp.* from literature: 16.

LAURACEAE

Camphor Tree (*Cinnamomum camphora*) - An exotic tree naturalized in much of southern Louisiana. A fair amount of usage by relatively few species. **Dates**: Nov-Jan. **Observed**: 3.

Spicebush (*Lindera benzoin*) - Fairly well distributed in Louisiana, mostly in beech-magnolia riparian areas and other moist, shaded habitats. Medium shrub. **Dates**: Aug-Oct. **Observed**: 9. **Literature**: 6.

Red Bay (*Persea borbonia/palustris*) - Small to medium evergreen tree. Often found in "bay gall" (acidic seep) areas in Florida parishes, northern and central Louisiana. *P. palustris* is sometimes found along marsh spoilbanks and in other areas near the immediate coast. Observational and supplementary data mostly lacking, but should be considered as a potentially important species group. **Dates**: Sep-Nov. **Literature**: 3.

Sassafras (Sassafras albidum) - Well distributed throughout Louisiana (excluding coastal parishes), where it is used by summer/early fall bird species. Small to medium, colony-forming tree. Especially common in disturbed habitats in central and north Louisiana. Dates: Jun-Sep. **Literature**: 14.

MAGNOLIACEAE

Southern Magnolia (*Magnolia grandiflora*) - Common statewide in wild and planted landscapes. Fairly high utilization exhibited in observed and supplemental data. Sweetbay magnolia (*M. virginiana*) is probably equally (if not more) important to avian frugivores in the early fall months, but no data has been collected involving this species. **Dates**: Jul-Nov. **Observed**: 11. **Literature**: 2.

MELIACEAE

Chinaberry Tree (*Melia azedarach*) - Escaped exotic; locally common statewide. Like the camphor tree, this small tree receives a fair amount of use from a few species of birds. **Dates**: Sep-Feb. **Observed**: 3.

MENISPERMACEAE

Carolina Moonseed (Cocculus caroliniana) - Widely distributed evergreen vine in Louisiana, Prominent red fruit clusters, **Dates**: Oct-Jan, **Observed**: 5.

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MORACEAE

Red Mulberry (*Morus rubra*) - Fairly widely distributed in Louisiana, particularly in some bottomland hardwood habitats, some cheniere habitats, and many waste areas. This species, along with black mulberry (*M. nigra*), and white mulberry (*M. alba*) and various hybrids between the three are often found in cultivation. Especially important for spring migrants and selected breeding species in Louisiana. **Dates**: Apr-Jul. **Observed**: 12. **Literature** (includes all Mulberry sp.): 14.

MYRICACEAE

Wax Myrtle (Myrica cerifera) - A well-known and ubiquitously distributed (especially in disturbed habitats) large evergreen shrub in Louisiana. Most birds apparently utilize the waxy, lipid-rich coating on these fruits, rather than the fruits themselves. Dates: Sep-Jan. Observed: 4. Literature (includes all "bayberry" citations): 17.

NYSSACEAE

Black Gum (*Nyssa sylvatica*) - Also known as sour gum. Well distributed throughout a range of habitats in the Florida parishes, central, and north Louisiana. Water tupelo, or tupelo gum (*Nyssa aquatica*) is more restricted to deep swamp/bottomland habitats throughout the state. **Dates**: Sep-Nov. **Observed** *N. sylvatica*: 14. **Literature**: 12. *N. aquatica* from Literature: 3.

OLEACEAE

Fringe Tree (*Chionanthus virginicus*) - Sometimes known as the "grancy greybeard". Well distributed in north Louisiana; widely planted elsewhere. A small tree of drier, mixed forests. Little observational data was accumulated. Perhaps this is due to the fact that, like rough-leaf dogwood, its fruits are generally stripped as soon as they ripen, leaving little additional time for casual observation. **Dates**: Jul-Oct. **Observed**: 1. **Literature**: 1.

Wax-leaf Ligustrum (*Ligustrum japonicum/lucidum*) - Widely planted exotic species (large shrub/small tree); occasionally escapes from cultivation, particularly in bottomland hardwood habitats in south Louisiana. Observational data mostly lacking. **Dates**: Oct-Jan. **Observed**: 1.

Chinese Privet (*Ligustrum sinense*) - Stoloniferous, evergreen, exotic shrub which has escaped cultivation into many habitats throughout much of Louisiana. **Dates**: Oct-Mar. **Observed**: 11.

Devilwood (Osmanthus americana) - A small, evergreen tree with natural distribution presumably limited to pinelands within the eastern Florida parishes. Jessie Johnson (Caroline Dormon Nature Preserve in Natchitoches parish) reports high usage by an indeterminate number of bird species as soon as the fruits ripen in late summer/early fall on planted specimens. **Dates**: Sep-Oct.

PHYTOLACCACEAE

Pokeweed (*Phytolacca americana*) - Also known as pokeberry. A large annual (to 3 m) which is rather abundantly distributed throughout Louisiana. Interestingly, only few observations involved this plant (though its presence was reported by many observers), whereas it was one of the most widely cited species in the supplemental data. **Dates**: Jun-Frost. **Observed**: 5. **Literature**: 20.

Pigeonberry (*Rivinia humilis*) - Sometimes known as "rouge plant," this tropical/subtropical woodland herbaceous plant is similar to pokeweed in that it offers copious amounts of fruits over many months. Sparingly native to Louisiana's coastal parishes. Red-eyed Vireo (*Vireo olivaceus*) was found to be the primary disperser of pigeonberry seeds in southern Mexico (Calvo-Irabien, et al, 1997). **Dates**: Jun-Frost. **Observed**: 1.

PODOCARPACEAE

Japanese Yew (*Podocarpus macrophyllus*) - Exotic evergreen tree that is much cultivated throughout Louisiana. No escapes into the wild have been reported. **Dates**: Sep-Jan. **Observed**: 3. **Literature**: 2.

RHAMNACEAE

Supplejack (*Berchemia scandens*) - Also known as "blackjack" or rattan vine. Very widely distributed, especially in bottomland/riparian habitats. **Dates**: Sep-Jan. **Observed**: 9. **Literature**: 3.

Carolina Buckthorn (Frangula caroliniana or Rhamnus caroliniana) - Also known as "indian cherry". A small deciduous tree, confined in distribution

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to drier, mixed forests in the Florida parishes, north, and central Louisiana. As with rough-leaf dogwood and fringe tree, avian frugivory observations were mostly lacking on this species, possibly because usage is very high during a relatively short time frame. **Dates**: Aug-Nov. **Observed**: 4.

ROSACEAE

Serviceberry (*Amelanchier arborea*) - Sometimes known as "shadbush". A small tree with limited distribution (primarily in beech-magnolia transitional forests). A summer fruit producer with potential food value limited to breeding frugivores which might nest in the vicinity. No observational data collected. **Dates**: May-Jul. **Literature**: 16.

Chokeberry (Aronia arbutifolia) - A deciduous shrub with Louisiana distribution limited to acidic bottomlands in the Florida parishes and central Louisiana. Fruits generally do not ripen until October. **Dates**: Sep-Nov. **Literature**: 6.

Hawthorn (*Crataegus sp.*) - Several species exist within Louisiana, all with substantial potential for avian frugivory. Small deciduous trees. Widely distributed, mostly in sunny and/or disturbed habitats, though green haw (*Crataegus viridis*; aka "hog haw") often inhabits bottomland and cheniere forests. The observed frugivory reports in Louisiana are attributable to this species, plus one observation on parsley hawthorn (*C. marshallii*). **Dates**: Oct-Jan. **Observed**: 3. **Literature**: 8.

Loquat or **Japanese Plum** (*Eriobotrya japonica*) - A Chinese native; small evergreen tree; widely planted south of Interstate-10 in Louisiana. Produces large (1"), juicy, plumlike fruits in spring. In the vicinity of Interstate-10 and northward, fruiting is often disrupted by late winter freezing of the blooms. **Dates**: Feb-May. **Observed**: 2.

Southern Crabapple (*Malus angustifolia*) - Small, colony-forming tree of occasional distribution throughout much of Louisiana, excluding the Mississippi River floodplain. Fruits ripen in late summer, and are of a size (~1") that may preclude many potential avian frugivores. **Dates**: Jul-Oct. **Literature**: 2.

Photinia (*Photinia sp.*) - Oriental natives; large evergreen shrubs (occasionally) producing clusters of round, red fruits; several species/hybrids widely planted throughout Louisiana. Fruiting episodes are highly irregular in Louisi-

ana (Seidenberg 1995). Seidenberg (1990) reports frugivory in New Orleans by Cedar Waxwing only, similar to observational data in this study. **Dates**: Sep-Feb. **Observed**: 1.

Black Cherry (*Prunus serotina*) - Widely distributed statewide; often springing up as bird-dispersed "volunteers" in cultivated gardens. Like red mulberry, an important food source for many migrating and/or breeding birds in Louisiana. **Dates**: Mar-Aug. **Observed**: 14. **Literature**: 11.

Firethorn (*Pyracantha sp.*) - Widely planted exotic "shrub-vine". Probably most used by mimic thrushes. **Dates**: Sep-Jan. **Observed**: 1.

Blackberries and Dewberries (*Rubus sp.*) - At least three species of dewberry, and an as-yet unknown number of blackberry species occur ubiquitously in Louisiana - all of which are surely important to selected late spring-migrating and breeding bird species. Unfortunately, no observed data was recorded for either group; most probably owing to the fact that frugivory is not easily observed within their dense, thorny, colonies. **Dates**: Mar-Jul. **Literature**: 25.

RUBIACEAE

Firebush (*Hamelia patens*) - A Carribean native, said to also be native to parts of Florida, this species is currently planted in gardens throughout the lower Gulf Coastal Plain as a hummingbird nectar source. In mid to late winter, it produces clusters of dark, flattened, oval fruits. The plant is non-invasive, and could potentially serve as a fruit source for Northern Mockingbird and other wintering Mimids. **Dates**: Nov-Dec. **Observed**: 1.

RUTACEAE

Prickly Ash (*Zanthoxylum clava-herculis*) - Sometimes known as "toothache tree". Fairly well distributed throughout Louisiana in mostly sunny habitats. Small deciduous tree. As with rough-leaf dogwood and others mentioned, fruits are stripped as soon as they ripen, thus skewing reported observations. Seems most highly used by late-summer migrating flycatchers. Also, a prime host plant for the giant swallowtail butterfly. **Dates**: Jul-Aug. **Observed**: 9.

SMILACACEAE

Catbrier (Smilax sp.) - In this survey, taken together with "greenbriar" as a

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complex involving ten species within Louisiana. All evergreen vines, and ubiquitously distributed through woodlands and hedgerows. **Dates**: Sep-Jan. **Observed**: 5. **Literature**: 14.

SOLANACEAE

Bird Pepper (*Capsicum annuum frutescens*) - Small perennial shrub with Louisiana distribution limited to "understory" scrub areas on the immediate coast. Value to fall/winter avian frugivores undetermined due to lack of observations. **Dates**: Aug-Dec. **Observed**: 3.

Salt-matrimony Vine (*Lycium carolinianum*) - As with the above species, this shrubby perennial vine is limited in distribution to the immediate coast. Occurring abundantly in proper habitat, its conspicuous, red, juicy fruits suggest high potential for avian use during late fall/winter months. **Dates**: Sep-Jan. **Observed**: 2.

ULMACEAE

Hackberry (*Celtis laevigata*) - Medium to large deciduous tree distributed in moist habitats throughout Louisiana, particularly in alluvial soils. One subspecies (*C. l. reticulata*) and one additional species (*C. tenuifolia*; called dwarf hackberry) are restricted to the northern third of the state. Enjoys exceedingly high usage by many bird species during the winter months. **Dates**: Aug-Feb. **Observed**: 27. **Literature**: 7.

VISCACEAE

Mistletoe (*Phoradendron leucarpum/tomentosum*) - Widely distributed arboreal parasite in Louisiana. Observational data mostly lacking. **Dates**: Oct-Jan. **Observed**: 3. **Literature**: 2.

VERBENACEAE

American Beautyberry (Callicarpa americana) - Also known as french mulberry, Spanish mulberry, and/or inkberry. Widely distributed deciduous shrub throughout both wet and dry forested habitats in Louisiana. Dates: Jul-Nov. Observed: 13. Literature: 2.

West Indian Lantana (Lantana camara) - A widely planted exotic species

which has escaped cultivation along the coastal parishes of Louisiana. Observational and supplementary data from literature mostly lacking for this species; as well as completely lacking for its sibling species, *Lantana urticoides* (aka *Lantana horridus*; native in the coastal parishes). At this point, circumstantial evidence (i.e. birds noted flying in and out of these plants, but relatively few observations of birds actually consuming fruits) for usage seems high, especially with mimic thrushes. **Dates**: Jul-Dec. **Observed**: 2.

VITACEAE

Pepper Vine (Ampelopsis arborea) - Deciduous vine, widely distributed in sunny, disturbed sites. Data mostly lacking for this species, possibly due to "dense thicket" nature of its colonies (as is the case with Japanese honeysuckle). An additional species, A. cordata, is also widely distributed; and is also probably much used by birds. **Dates**: Jul-Nov. **Observed**: 5.

Virginia Creeper (*Parthenocissus quinquefolia*) - Widely distributed throughout most all Louisiana habitats, as well as urban/suburban landscapes. Possibly the most highly used (by the largest diversity of bird species as well) native plant species among fall-migrating frugivores in Louisiana. **Dates**: Sep-Oct. **Observed**: 23. **Literature**: 6.

Wild Grape (Vitis sp.) - Treated here as a complex, involving nine species; five of them rather ubiquitously distributed in Louisiana. As a complex, these species exhibit fruiting from summer through early winter, furnishing potential food for breeding, fall-migrating, and wintering birds as well. Most observational data recorded are probably referable to Vitis cordifolia, the riverbank grape. All supplementary data were recorded simply as "wild grape". Dates: Jun-Dec. Observed: 13. Literature: 17.

Discussion

Regarding the straight observational data presented from Louisiana in particular, the temptation to draw quantitative conclusions is great. Snow and Snow (1988), however, elucidate on the inherent dangers of doing so when using unquantified observational field data: "The most obvious method of studying fruit-eating is, of course, direct observation of a bird eating a fruit; but in order to avoid bias, one needs to adopt a system of observation. Casual records are not to be recommended, as the more conspicuous birds or fruits will always be over-recorded and the less conspicuous under-recorded."

But by the same token, it should also be obvious that the "casual" data presented in this study will most certainly be valuable in a preliminary or baseline sense, at least to researchers, wildlife managers, habitat restorationists, and others. Further, at least two solid conclusions can be extracted from the data presented. The first is that fruit-bearing plants play an exceedingly important, if not crucial role relative to the seasonal birdlife of Louisiana. Second, when dates of individual observations are combined with individual bird-fruit pairings, much can be learned concerning the chronology of avian fruit utilization, as well as the individual fruiting phenologies of the involved plants in Louisiana. From such an examination, for example, it can be concluded that while the Chinese privet and most all of the holly species surveyed present ripened fruits by late fall, the vast majority of avian utilization of these species does not occur until late winter or early spring. From such observations, questions for further study may be asked: Must these fruits' chemical compositions be altered through an ageing process before they reach nutrient levels (i.e. from starches to simple sugars) more desirable by birds? Or, do these fruits simply offer less nutritional value than fruits eaten earlier in the season? Or, do the changing nutritional compositions due to ageing of these fruits better lend them to late winter/early spring energy budgets/activities?

Moreover, at least a few very generalized inferences may be made concerning the data supplied. Plants exhibiting the most overlap in bird species utilization might be isolated for further study. In the case of Virginia creeper (Parthenocissus quinquefolia), for example, most observers reported high rates of utilization by many bird species, often on a simultaneous basis. Observations on a single plant of this species at the Acadiana Park Nature Trail (Lafayette, LA) between 3-10 October 1994, for example, revealed usage by 15 species of birds - quite comparable to subject plants noted in tropical frugivorous speciesrich assemblage studies by Beebe (1916), Willis (1966), Leck (1969), and Kantak (1979); and much exceeding the temperate species-rich assemblage investigation published by Rybczynski and Riker (1981) conducted in upstate New York. Further preliminary inferences may be made concerning which bird families, genera, and species are most prone to frugivorous behavior at various seasons within Louisiana. We find, for example, that both migratory and local flycatchers seem exceptionally frugivorous as they trek through Louisiana during the late summer and early fall months (when flying insects are obviously abundant here!) en route to their tropical wintering grounds. We find that the aptly named Myrtle Warbler is probably the most frugivorous species within its family (Parulidae) relative to warbler species wintering in the U.S. We find that the White-throated Sparrow is apparently the most frugivorous sparrow, both in its southern U.S. winter range and northern U.S. breeding range as well.

Need For Further Study

Martin (1951) rightly stated: "The scientific study of food habits has proved one of the most essential tools in gaining an intelligent understanding of our wildlife." With each new study initiated within a given region, knowledge gaps are filled, and new gaps are discovered. Such is the process of scientific inquiry. Regarding this initial survey of avian frugivory in Louisiana, it should become apparent that much remains to be learned here. Of the birds and plants that were observed, data is relatively skimpy on more than half of the species of both groups. Also, lab analysis of Louisiana bird stomachs is much needed for the purpose of combining with observational data; for a combination of these two investigative techniques will surely prove more valuable than either alone (Martin 1951; Snow and Snow 1988, among others). A fairly large collection of preserved, unanalyzed stomachs currently exists at the LSU Museum of Natural Science, and should provide an excellent starting point for such an investigation.

Workers who are potentially interested in initiating avian frugivory studies in Louisiana should review Martin (1951), Snow (1971), Willson (1986), and Snow and Snow (1988), all of which contain basic outlines of historical and existing frugivory investigations within the temperate zone, along with specific methodologies employed to execute them.

Acknowledgments

Particular thanks are due Mac Hardy, Jim Ingold, and J.V. Remsen, Jr. for their encouragement, manuscript review, and suggestions; as well as to Wylie Barrow and Judith Buys for their assistance in literature review. Special thanks go to the additional field observers who made this survey possible: North Louisiana - Paul Dickson, Jim Ingold, Jeff Trahan; Central Louisiana - Kermit Cummings, Jessie Johnson; Southeast Louisiana - Christopher Brantley, Dave Carney, Olga Clifton, Miriam Davey, David Muth, Glenn Ousett, Van Remsen, Charlotte Seidenberg, Jeff Stratford; Southwest Louisiana - Wylie Barrow, Jim Bollich, George Broussard, Paul Conover, Jack Deshotels, Stacey Fischer, Julia Larke, Dave Patton, Missy Powell, Bill Vermillion, Jim Whelan.

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STATUS AND NATURAL HISTORY OF BIRDS OF LOUISIANA. I. VIREOS (VIREONIDAE)

J. V. Remsen, Jr., Steven W. Cardiff, and Donna L. Dittmann Museum of Natural Science, Louisiana State University, Baton Rouge, Louisiana 70803 USA

The status of the birds of Louisiana as a whole has not been updated since Lowery (1974). We are working on a book that will not only document the status of Louisiana birds in detail but will also include data not presented by Lowery (1974) on habitat, identification, behavior, timing of migration, high counts, diet, band recoveries, body weight, bare part coloration, and subspecies status. To give field observers an idea of what sorts of data will be presented and what kinds of information are still needed, we plan to publish separately many family chapters. This is the first in the series. We have omitted here the sections on identification, most behavioral information, timing of breeding (except for Bell's Vireo, for which little if any additional data exist), and band recoveries (unknown at this point whether any exist for vireos in Louisiana). We solicit comments, additions, and corrections from those working on birds in Louisiana.

The sequence of families, genera, and species, as well as the English and scientific names, follows that of the A.O.U. Check-list (1998). For each species, we provide the following information (as well as occasional elaboration on other topics):

STATUS AND HABITAT: We described abundance using the following terms with respect to the *usual* number detected per 4-hr morning in suitable habitat (from our experience in Louisiana): *abundant* = more than 100; *common* = 25-99; *fairly common* = 6-24; *uncommon* = 2-5; rare = 0-1; casual = averages fewer than four records per *year* in all of Louisiana.

To describe seasonal status in Louisiana, we used the information in Oberholser (1938), Lowery (1974), records in Audubon Field Notes/American Birds, and our own experience in Louisiana. We use the following terms to describe seasonal status: permanent resident = found throughout the year; migrant = engaged in seasonal movement between breeding and winter ranges; breeding = breeds in Louisiana; winter resident = resides in Louisiana through winter months; winter visitor = occurs in Louisiana during winter months but does not seem to remain for extended periods; spring = anytime from late January to early June, depending on the migration period of the species in

question; *fall* = anytime from late June to early December, depending on the migration period of the species in question; *early winter* and *late winter* = many species that occur in Louisiana in "winter" actually show pronounced differences in status in the first portion of winter, say late November to about first week of January, compared to the second portion of winter, from about the second week of January through early March. Therefore, we use *early winter* to identify the first portion, *late winter* the second portion, and *winter* for the entire period. Many species whose main population winters south of Louisiana occur in low numbers in early winter but are extremely scarce in late winter. David A. Wiedenfeld and Bill Vermillion provided data from the Louisiana Breeding Bird Atlas program to assess breeding distributions within the state.

We use the following terms with respect to Louisiana geography: (1) "northern Louisiana" = north of the southern boundaries of Sabine, Natchitoches, Winn, Caldwell, Franklin, and Tensas parishes; this corresponds fairly closely to the January mean minimum temperature isotherm of 35°F; "central Louisiana" = south of the same boundary (to include all of Vernon, Rapides, Grant, La Salle, Catahoula, and Concordia parishes) to the southern boundaries of Calcasieu, Jefferson Davis, Acadia, Lafayette, St. Martin, Iberville, Ascension, and Livingston parishes and all parishes north of Lake Pontchartrain; this corresponds fairly closely to the 40°F isotherm for January mean minimum temperature; and "southern Louisiana" = all parishes south of the above (which includes all parishes bordering the Gulf of Mexico as well as Assumption, St. James, St. John the Baptist, St. Charles, and Orleans). These boundaries are unavoidably arbitrary, the consequence of forcing typological categories on an obvious continuum of variation, and also result in the unfortunate inclusion in "central Louisiana" of many areas that are culturally and biologically in "south" Louisiana. We welcome suggestions for improving the current categories.

SIGNIFICANT RECORDS or RECORDS: We tabulated individual records for seasons or regions when or where a species' status is casual. These records were taken from Oberholser (1938), Lowery (1974), the regional reports and Christmas Bird Counts in *Bird-Lore/Audubon Field Notes/American Birds/National Audubon Society Field Notes*, the published reports of the Bird Records Committee of the Louisiana Ornithological Society, Cardiff's column in *L.O.S. News*, other published literature, R. D. Purrington's unpublished manuscript on the birds of southeastern Louisiana (cited as "Purrington MS"), unpublished records in the "*American Birds*" File (hereafter "ABF") housed at the Museum of Natural Science, Louisiana State University, and our own field notes. For species whose state-wide status is casual, we list all records that we consider valid in chronological order by year. For other species, we often list records that are (a) extremes in arrival or departure, (b) unusual for a

particular region of the state, or (c) unusual for a particular season. In these cases, the records are listed in chronological order by date, regardless of year, unless the status has changed historically, in which case the records are listed chronologically by year. In the case of extreme dates, we have listed the three most-extreme dates that we can find, but we often provide more than three dates to give a more comprehensive representation, particularly regionally. Unfortunately, we have been unable to find three extreme dates for all regions of Louisiana in every case. We have also attempted to list the extreme records supported by archived tangible evidence, i.e., museum specimens, photographs, videotapes, or tape-recordings.

For each record, the number of individuals involved is "one" unless another number is provided in parentheses in front of the date. Genders of specimens are also provided in parentheses in front of the date; "u" refers to specimens that could not be sexed. Localities in parentheses refer to names given to sites by bird-watchers but not known by these names on topographic maps. Parish names are italicized but are not included for major cities or well-known localities. Observers are listed in order of their listing in American Birds or elsewhere, with the person credited with finding the bird listed first. For specimen records, the first person listed is also the one who collected the specimen unless "[coll.]" follows the name of someone else. Literature citations are provided for published records. Records published in Audubon Field Notes/ American Birds followed by the notation "ABF" have supplemental information from the ABF, such as specific locality or more precise dates, that were not published. If there is an error in the published records in American Birds with respect to dates, observers, locality, etc., that conflicts with what we present, then the reference is marked with a superscript ".". Records from Christmas Bird Counts are identified by "CBC," and those from the U.S. Fish & Wildlife Service's Breeding Bird Survey program are identified by "BBS"; precise localities within the count areas for these records are often omitted because they are not known. Previously unpublished records taken from the ABF are indicated by "ABF" after the observer name or initials. If a citation other than an observer's name or initials is not provided for a record, then it is a previously unpublished record from that observer's personal field notes. Museum catalog numbers are given for those records supported by specimens. abbreviations are as follows: LSUMZ (Museum of Natural Science, Louisiana State University), and USNM (National Museum of Natural History, Smithsonian). Reports in American Birds often indicate that photographs were taken, but if these were never published, deposited in a reference collection, or deposited in the ABF, we do not consider the record to have been documented by a photograph.

DIET: Only observations from Louisiana are included. When available, we provide summaries of our own field observations on foods taken or data from the LSUMZ Stomach Contents Collection.

TIMING OF MIGRATION: The only published quantitative data that exist for Louisiana for vireos are those of Remsen et al. (1996), which compared surveys from a coastal area (*Cameron*) to those from an inland area (near St. Gabriel, *Iberville*). Lacking data from elsewhere, however, we cannot be certain that the differences found between the areas might also be differences between western and eastern Louisiana. Unfortunately, the small sample sizes of specimens available for most species greatly limit analyses of differences in timing between age and sex classes.

BAND RECOVERIES: For each species, we obtain data from the Bird-Banding Laboratory, U.S. Fish & Wildlife Service, for individual birds banded in Louisiana and recaptured away from their banding sites or birds banded outside Louisiana recaptured in Louisiana. For vireos, there are currently no records of either kind (K. Klimkiewicz, pers. comm.).

HIGH COUNTS: To provide information on maximum numbers that can be found in a day, we list the highest single-day totals known to us within each season of occurrence of a species. These include only totals found by a single group of observers, not the composite totals of several groups, such as reported on Christmas Bird Counts (although totals from single parties on a Christmas Count are eligible). For species with seasonal movements, such high counts may identify periods of peak movements. For permanent resident species, such counts give some indication of their abundance in Louisiana. However, we recognize that much higher totals could be obtained for virtually every species if an observer dedicated the entire day to finding *only* that species. We have not included more than two high counts from the same area. High counts from the U.S. Fish and Wildlife Service's BBS program, other than Remsen's, were provided by David A. Wiedenfeld and Bruce Peterjohn.

Ideally, such "high count" figures would represent density number of individuals/unit area). Such data, however, are mostly unavailable. Although the figures that we report reflect abundance, they have no density component. In fact, the "high count" figures depend often on how much territory was covered during the day and the skill of the observers, especially in voice identification. Unfortunately, they also are influenced by the abilities of the observers to estimate numbers and the tendency by many observers to exaggerate numbers, particularly of highly vocal, active species. It is only human nature to want to "credit" oneself with each vocal or visual detection, regardless of the

likelihood of duplication of individuals. We suspect that some birders have an unfortunate tendency towards "one-upsmanship" with respect to reporting large numbers of birds. We have excluded certain high counts from our compilations because we suspect that one or more of the above-mentioned factors produced exaggerated numbers.

In a few cases, truly phenomenal counts may misrepresent the numbers that might be expected during that time period. For example, on 29 August 1986 Al and Gwen Smalley encountered a truly spectacular, perhaps once-in-a-lifetime, "fall-out" of fall migrants that produced several all-time high counts of migrants that rival or exceed those from spring migration.

BARE PARTS: Although the colors of bird feathers remain largely unchanged from life in recently collected specimens, the colors of the "bare parts" are unavailable (iris) or experience varying degrees of post-mortem change (iris, bill, facial skin, tarsus, toes). Color descriptions of these bare parts recorded on specimen labels upon the death of the bird thus provide a reservoir of data on bird coloration otherwise difficult to obtain. We provide such data from LSUMZ specimens collected in Louisiana. Ideally, such data would come from live individuals, with comparisons to color standards under similar light by the same person. In reality, the bare part colors are noted by a variety of preparators with differing color interpretations and degrees of experience and attention to detail, and under heterogeneous lighting conditions. The vast majority of bare part colors on LSUMZ specimens are recorded as soon as possible after death and before freezing. Nevertheless, we suspect that much of the heterogeneity in the descriptions is an artifact rather than individual variation in the birds themselves. Therefore, we have not quantified the variability, particularly because this also depends on how many specimens of each species were prepared by particular people. However, we list color descriptions in order of frequency of use. We did scan our compilations of bare part colors for each species to see whether consistent, obvious patterns existed in gender, age, or seasonal differences. None were found for vireos, except in some young White-eyed Vireos.

One reason why we present bare part colors is that these are often inaccurately displayed in field guides. For example, artists usually add depth to the appearance of the maxilla by giving it some sheen along the culmen, thereby making it difficult to be certain that the maxilla is uniformly colored, such as in vireos, for example, in which all species discussed herein have a uniformly dark maxilla. The reduction in size of field guide portraits from the original paintings also tends to make the iris color look black rather than the typical dark brown or brown in many vireos. Because it is difficult in the field to see that the iris is not black, field guide portraits probably more accurately portray the color

discernible under most field conditions. Nevertheless, knowing true iris color is important. Finally, field guide illustrations of tarsus and toe color of vireos tend to under-represent their blue tones. At least one reference (Phillips 1991) portrays erroneous tarsus color for vireos.

SUBSPECIES: We summarize current understanding of subspecies taxonomy for Louisiana populations. For subspecies that have occurred only a few times, details of records are given.

UNSUBSTANTIATED, DUBIOUS, OR ERRONEOUS RECORDS:

We list published records that we do not believe are valid or for which substantiating details are unavailable. For the vast majority of records in this category, absence of written details is the reason for their inclusion in this category; we encourage the observers to provide us with such details if available for records in this category. We do not include records rejected by the Bird Records Committee of the Louisiana Ornithological Society unless the original record was previously published as valid. We usually do not include suspicious records published only in local newsletters without supporting details.

BODY WEIGHTS: Body weight is a good indicator of overall size differences, particularly for those species that differ in proportions so that linear measurements might be misleading. In the Appendix, we present weights (body mass) of specimens in grams. Only data from specimens from Louisiana are provided unless stated otherwise. For age/sex/fat categories for which there are 6 or more individuals, mean, range, and sample size ("N") is provided. If there are 5 or fewer individuals in a category, all individual weights are listed. Some preparators round body weights to the nearest whole gram, whereas others weigh to the nearest 0.1 gram; therefore, a mass of "11" indicates a rounded value, whereas "11.0" indicates the latter. Because fat deposits influence body mass strongly, we compiled specimens in three categories: (1) "no," "trace," or "light" fat; (2) "moderate" or "heavy" fat; and (3) "very heavy" or "extremely heavy" fat. Users of body weight data must keep in mind that differences among scales used to weigh the various specimens as well as individual differences in assessing fat levels create heterogeneity in the data. Because our data come from a single institution, such problems are reduced but still evident, as inspection of our tables will show.

Dunning's (1993) compilation of body mass data for birds of the world was intended to provide the "best" data sets available for each species. For several of the vireo species treated in this paper, the "best" data sets found by Dunning were from bird-banding studies that were unable to determine the gender of the individuals weighed. Also, no account was made for differences in subcutane-

ous fat levels that influence body mass drastically, as reflected in the huge range in body masses reported. Although Odum's (1993) laboratory-generated data that compare "dry mass" are obviously the best comparative data for these vireos and other species, they cannot be compared to typical body-mass data. Therefore, some of our specimen data might provide the best comparative data because differences in age, sex, and fat levels can be factored out.

White-eyed Vireo Vireo griseus

STATUS AND HABITAT: Common breeding species state-wide, except rare in coastal cheniers. Common migrant state-wide. In winter, rare to casual in northern Louisiana, rare in central Louisiana, and rare to uncommon in southern Louisiana. In coastal cheniers and probably elsewhere, much less common in late-winter than in early winter (Remsen et al. 1996). Found primarily in deciduous forest edge, near tree-fall gaps in deciduous forest interior, and in dense second-growth. In winter, more restricted to areas with dense undergrowth. The highest densities of breeding-season White-eyed Vireos in the United States have been found in Louisiana (Hopp et al. 1995).

SIGNIFICANT RECORDS:

<u>early spring migrants in central Louisiana (assuming tower-killed individuals represent true migrants):</u>

- (O, Q, u) 15 Mar. 1964, Baton Rouge (S. A. Gauthreaux; tower-kills LSUMZ [skeletons] 48893-94, 51377)
- (♂) 19 Mar. 1973, Baton Rouge (R. Louque; tower-kill LSUMZ [skeleton] 73174)

early spring migrants in northern Louisiana:

- 13 Mar. 1955, near Shreveport (H. H. Jeter; Newman 1955)
- 14 Mar. 1972, Natchitoches (R. B. Hamilton; ABF)
- (4) 25 Mar. 1995, Cross Lake, *Caddo* (C. E. Lyon)
- (4) 30 Mar. 1991, Coopiona area, *Caddo* (C. E. Lyon)
- (2) 30 Mar. 1992, Walter Jacobs Park, Caddo (C. E. Lyon)
- 30 Mar. 1994, Cross Lake, Caddo (C. E. Lyon)
- (3) 30 Mar. 1994, Ford Park, Shreveport (R. Seidler, L. Cunningham; ABF) early winter in northern Louisiana:
- 18 Dec. 1983, north shore Cross Lake (H. H. Jeter et al.; Shreveport-BC CBC; Myers and Muth 1984; ABF)
- 18 Dec. 1993 (D'Arbonne CBC)
- 20 Dec. 1969 (R. B. Hamilton; Natchitoches CBC)
- 20 Dec. 1970, Natchitoches (R. B. Hamilton; ABF)
- 21 Dec. 1957 5 Jan. 1958, 2 mi. W of Longwood, near Shreveport (J. R. Stewart, R. Lance; Shreveport CBC, Newman 1958a)
- (3) 23 Dec. 1940, 9 mi. N Monroe (G. H. Lowery, Jr.; LSUMZ 4597)

- 26 Dec. 1981 (R. & S. Lance; Shreveport CBC)
- 28 Dec. 1991 (Bossier-C-B CBC)
- 30 Dec. 1987 (Tensas River NWR CBC)
- 30 Dec. 1992 (Tensas River NWR CBC)
- 2 Jan. 1971, Natchitoches (R. B. Hamilton; ABF)
- 5 Jan. 1997 (Bossier-Caddo-Bienville CBC)

VOCAL MIMICRY: Forbush (1929) and Oberholser (1938) reported long ago that the White-eyed Vireo imitates call notes of other bird species. This prominent aspect of its song was documented and quantified by Adkisson and Connor (1978), who found that 95 of 100 song-types recorded in Virginia contained identifiable imitations of other bird species' vocalizations. McNair and Forster (1983) also reported imitations of other bird vocalizations in the songs of 30 individuals from southern New England and the southern United States. Nevertheless, few field ornithologists are evidently aware of this. In fact, Borror (1977), in a major analysis of the song of White-eyed Vireo from throughout its range, evidently did not realize that this species copies other bird vocalizations and that much of the geographic variation in song could be the result of different species available for copying. Of the widely used field guides or bird books that we have searched, only a few (e.g., Imhof 1976a) mention this aspect of White-eyed Vireo song, and we can find no mention of it in the general literature other than some quotes from Forbush (1929) in Bent (1950). Because the White-eyed Vireo imitates the calls of many common Louisiana birds, these imitations provide a potential source of error for censusing, particularly for the 3-min count intervals used in the U.S. Fish and Wildlife Service's Breeding Bird Survey.

The legendary variability of White-eyed Vireo song, mentioned by virtually all authors who describe it (e.g., Lowery 1931), is due in part to the variety of species imitated. Most songs, however, share a sharp introductory note, followed by 2-3 more melodious syllables, and a sharp terminal note. Louisiana, the sharp notes are often copied calls of Downy Woodpecker (Picoides pubescens), Acadian Flycatcher (Empidonax virescens), Hooded (Wilsonia citrina), Prothonotary (Protonotaria citrea), and Kentucky Warbler (Oporornis formosus), and occasionally of Eastern Wood Pewee (Contopus virens; the soft "plick" call). The middle syllable and last notes are frequently Summer Tanager (Piranga rubra) ("pi-ti-tuck" call), Wood Thrush (Hylocichla mustelina) ("pap-pap-pap"), Blue Jay (Cyanocitta cristata), Great Crested Flycatcher (Myiarchus crinitus), and Red-eyed Vireo (nasal "nyah"). Louisiana as elsewhere, the most frequently incorporated models are species (a) that have brief but distinctive calls, and (b) that vocalize frequently in the vicinity. Other species whose calls Remsen has noted in White-eved Vireo songs in Louisiana are: N. Flicker (Colaptes auratus), American Robin (Turdus

migratorius), Veery (Catharus fuscescens), Blue-gray Gnatcatcher (Polioptila caerulea), Gray Catbird (Dumetella carolinensis), Brown Thrasher (Toxostoma rufum), Song Sparrow (Melospiza melodia), N. Cardinal (Cardinalis cardinalis), N. Waterthrush (Seiurus noveboracensis), Common Yellowthroat (Geothlypis trichas), Yellow-breasted Chat (Icteria virens; nasal "yowmp!"), and House Sparrow (Passer domesticus).

DIET: Primarily arthropods, but in fall some fruit is occasionally consumed (e.g., Spicebush, *Lindera benzoin*). LSUMZ stomach contents: arthropods only (N = 47, including 2 with caterpillars); arthropods (1 caterpillar) and fruit (N = 3). Only 1 stomach content sample is from winter; it is one of the two with fruit; perhaps additional samples from winter would show a higher proportion of fruit in diet (as is known elsewhere in range; Hopp et al. 1995); individuals wintering in Mexico rely heavily on fruit (Greenberg et al. 1993, 1995).

TIMING OF MIGRATION: The first influx of migrants in spring is usually in mid-March (Remsen et al. 1996); TV-tower kills of fat individuals unambiguously migrating have been recorded in Baton Rouge as early as 15 and 19 March. In coastal *Cameron*, spring migrants are detected through at least the first week of May, and fall migrants are detected from mid-September through late October, with the peak at around 10-15 October (Remsen et al. 1996). Inland, near St. Gabriel, no spring migration is detectable; in fall, numbers begin to increase over breeding populations in mid-August, and highest numbers occur in the first three weeks of September, declining sharply thereafter through late October. Therefore, fall migration occurs substantially earlier inland than on the coast (Remsen et al. 1996).

HIGH COUNTS:

SPRING MIGRATION: **150-200** (exceptional), 11 Apr. 1978, Grand Isle (M. Myers, N. Nelkin, J. Reinoehl; ABF); **60**, 3 Apr. 1980, Grand Isle (S. W. Cardiff); **40**, 11 Apr. 1990, *Cameron* (A. W. Kratter, J. Sterling).

BREEDING: **144**, 23 May 1994, Atchafalaya River, *St. Martin & Pointe Coupee* (A. W. Kratter, J. V. Remsen); **107**, 16 June 1992, Atchafalaya River BBS, *St. Martin & Pointe Coupee* (J. V. Remsen, D. A. Wiedenfeld); **80**, 17 June 1987, Plettenberg BBS, W. Feliciana (P. McKenzie).

FALL MIGRATION: 18, 29 Sep. 1985, Grand Isle (R. D. Purrington, N. Nelkin; ABF); 15, 15 Oct. 1983, Cameron (J. V. Remsen, C. L. Cummins, C. Massey, G. H. Rosenberg, T. S. Schulenberg; Remsen et al. 1996); 15, 18 Sept. 1994, Soda Lakes area, Shreveport (R. Seidler); 12, 9 Sep. 1990, on ca. 4 acres, 3.7 mi. N St. Gabriel, *Iberville* (J. V. Remsen; Remsen et al. 1996).

WINTER: 12, 25 Feb. 1996, *Jefferson* (P. Yaukey); 10, 12 Feb. 1996, *St. Charles* (P. Yaukey); 9, 8 Feb. 1987, Barataria Unit, J. Lafitte Nat. Hist. Park (J. P. Kleiman, M. M. Swan, P. McKenzie, R. J. Stein; ABF).

BARE PARTS: (N = 33). <u>Iris</u> = dull white, whitish, grayish-white, gray,

off white, white, or pearl white; of the six immatures with iris color noted, all from September or October, one is brown and five are whitish. Maxilla = black, dull black, usually with pale tomium. Mandible (variable; often with pale tomium) = leaden blue, gray, dark bluish-gray, dark gray, blue-gray; grayish horn, or silver, also sometimes (N = 5) bicolored, e.g., distal half gray, proximal half black. Tarsi and toes = bluish-gray, leaden blue, light gray, pale gray, gray, dark gray, blackish gray, slate gray (variability due to differences in fresh vs. frozen specimens?).

BODY MASS: Our data (Appendix 1) show that individuals may be able to increase their mass by more than 100% by addition of subcutaneous fat. Dunning's (1993) mean mass of 11.4 g is very close to our means for individuals with "no" or "light" fat.

SUBSPECIES: Burleigh and Lowery (1945) determined that the subspecies that breeds in most of Louisiana is the widespread subspecies of eastern North America, *V. g. noveboracensis*, and that *V. g. griseus* breeds along the immediate coast and in the New Orleans area (type locality restricted to "New Orleans"). This treatment was followed by the A.O.U. (1957) and Blake (1968). Phillips (1991), however, questioned whether *noveboracensis* was valid, but gave no reasons.

We compared 20 recent specimens of known or presumed breeding birds (based on gonad data) from the range of *noveboracensis* (central and northern Louisiana, mainly *St. Martin* and *E. Baton Rouge*) to 28 older specimens identified by Burleigh and Lowery (1945) as nominate *griseus* from southeast Louisiana (N = 8) and coastal Mississippi (N = 20). The recent series of *noveboracensis* was indistinguishable from an older series of 10 *noveboracensis* taken in the Baton Rouge area during late March-early April of 1939-42 (N = 8) and 1963 (N = 2). Thus, because it appears that there are no appreciable plumage color differences in old vs. recent specimens of the same subspecies, we tentatively agree with Burleigh and Lowery (1945) that the interior series averages yellower-flanked, greener-backed, and more extensively and brighter yellow in the lores-forehead region than the duller coastal series.

Unfortunately, we believe that the status of nominate *griseus* vs. *noveboracensis* cannot be fully resolved, for the following reasons: 1) The "*griseus*" specimens used in Burleigh and Lowery's (1945) original analysis lack gonad, body mass, and fat data that would be helpful in determining whether they were truly local breeders rather than migrants. 2) Burleigh and Lowery's series of "*griseus*" from southeast Louisiana and coastal Mississippi was a mixture of specimens taken in August (N=2), September (N=3), October (N=3), December (N=1), February (N=4), March (N=1), April (N=10), and May (N=4), but did not include any specimens taken between 6 May-25 August. Thus, none of their supposed specimens from the coastal breeding

population can be excluded as non-breeders. 3) Curiously, there are only 3 specimens (18 Apr., 3 and 8 Sep.), identified as noveboracensis in the LSUMNS series from coastal Mississippi and only 2 (17 Mar. and 27 Oct.) in the series from New Orleans; presumably, that subspecies should be a common migrant through those areas. 4) A small (N = 5) series of recently collected presumed breeders (mid-May through June) from the immediate coast of Cameron (presumably within the range of griseus) is indistinguishable from the series of interior noveboracensis. Only one of the Cameron birds exhibited definite signs of breeding activity (female with enlarged but regressing ovary and oviduct, and 4 regressing follicles), so we cannot exclude the possibility that some or all were late migrants or early post-breeders from elsewhere in the range of noveboracensis. Nonetheless, this potential inconsistency needs to be addressed. In light of these apparent obstacles to a sound analysis, we believe that recognition of V. g. noveboracensis is premature and that a final resolution of the status and distribution of White-eyed Vireo subspecies on the central Gulf Coast must await new specimen series of breeding birds from throughout southern Louisiana.

There is one record from Louisiana of *V. g. micrus*, a subspecies found primarily in northeastern Mexico and previously known only as far north as southern Texas (Blake 1968, Phillips 1991): collected by Robb T. Brumfield on 5 Nov. 1989 at East Jetty Woods, 2 mi. S Cameron (LSUMZ 152123; adult female). See Remsen et al. (1996) for details; this record also fits the dispersal pattern shown by several species from southern Texas or northern Mexico, namely a northeastward movement into Louisiana in late fall and winter (Cardiff and Remsen 1979; also see Bell's Vireo below).

Bell's Vireo Vireo bellii

STATUS AND HABITAT: Casual breeding resident in northwestern Louisiana in willow thickets. In 1950's, found nesting at several sites near Shreveport (Robson; Red River near Curtis; Gilliam; Bossier City; Dixie Gardens), but apparently no records there since then; in 1980's, a few pairs nested at Monroe. No documented records of spring migrants. Casual in fall and winter in scrubby chenier woods along coast of Cameron Parish, New Orleans area, and lower Mississippi River delta; few records elsewhere. Louisiana has an exceptional proportion of the few valid winter records of this species in North America (Remsen et al. 1996).

SIGNIFICANT RECORDS:

recent breeding areas:

• (3-4 pairs), Selman Field, Monroe, summer 1983, 1984, and 1985 (D. T. Kee et al.; Jackson 1983, 1984; Imhof 1985); 1 bird there 13 June 1986 (D.

- T. Kee; Jackson 1986); 2 birds, 1 carrying food, 20 & 27 May 1987 (D. T. Kee; Imhof 1987)
- (pair), 2-16 June 1996, ca. 1 mi. W Marsalis, *Claiborne* (C. Lyon, H. J. Jeter, J. P. Kleiman, M. Guidry, K. Fay; taped; Cardiff 1997a; Dittmann and Kleiman 1998)

fall migrants:

- 26 Aug. 1990, Lacassine Bayou, ca. 1.5 mi. NE Hayes, *Jefferson Davis* (K. V. Rosenberg; Jackson 1991)
- 7 Sep. 1991, 3.7 mi. N St. Gabriel (J. V. Remsen; Cardiff 1992, Jackson 1992, Dittmann and Kleiman 1998; ABF)
- (im. Q) 9 Sep. 1989, ca. 5 mi. E Cameron (S. W. Cardiff; Purrington 1990a; LSUMZ 152124)
- 15 Sep. 1986, *Cameron* (S. W. Cardiff, D. L. Dittmann, J. Holmes, Jr.; Purrington 1987)
- 24 Sep. 1987, New Orleans (N. Nelkin; Purrington 1988)
- 26 Sep. 1987, "Peveto Beach Woods," *Cameron* (M. M. Swan, D. Hunter; Purrington 1988; ABF)

early winter records:

- (ad. 6) 4 Nov. 1984, Willow Island, 7 mi. E Cameron (T. S. Schulenberg, D. Hunter, G. H. Rosenberg; Purrington 1985; LSUMZ 121881)
- 15 Nov. 1969, Laplace, St. John (R. J. Stein; Purrington 1970)
- 15 Dec. 1990, "East Jetty Woods," *Cameron* (J. V. Remsen, G. H. Rosenberg, A. W. Kratter; Sabine NWR CBC, Stedman 1991)
- 19 Dec. 1997, N Kaplan, *Vermilion* (Gary Broussard, Sam Broussard: Crowley CBC)
- 21 Dec. 1997, Johnsons Bayou (Mark Swan; Johnsons Bayou CBC; videotape)
- 21 Dec. 1997 Johnsons Bayou School (Paul Sunby; Johnsons Bayou CBC)
- 24 Dec. 1983 (J. B. Ortego; Creole CBC)
- 27 Dec. 1987 10 Jan. 1988 (D. B. Crider, J. Sevenair, G. Ousset, D. P. Muth, R. D. Purrington, M. Myers; New Orleans CBC, Muth 1988; ABF)
- 29 Dec. 1952, 5 mi. W Holly Beach (G. H. Lowery, Jr.; Lowery and Newman 1953, Lowery 1974; LSUMZ 72 [mount])
- 30 Dec. 1972, Cameron (R. J. Stein; Sabine NWR CBC; Lowery 1974)
- 30 Dec. 1981 (S. A. Gauthreaux, N. Nelkin, N. L. Newfield; Venice CBC, Ortego 1982, Purrington MS)
- 5 Jan. 1997. Plaquemines (D. P. Muth, K. V. Rosenberg, R. Seidler; Venice CBC, Stedman 1997)

late winter records:

• 13 Jan. 1974, Willow Is., *Cameron* (R. J. Newman, M. Newman, H. D. Pratt; Hamilton 1974)

J. La. Ornith.

- (u) 17 Jan. 1959, Reserve (M. Weber, R. F. Cambre; Newman 1959b, Lowery 1974; LSUMZ 22632)
- 3-27 Jan. 1993, Venice (K. V. Rosenberg, J. Arp, M. Weber, P. Wallace, R. Seidler, A. E. Smalley, C. Kersting; Venice CBC, Stedman 1993, Dittmann and Kleiman 1998; ABF)
- 25 Feb. 10 Mar. 1995, 1 mi. S Indian Bayou, Vermilion (P. Conover [video-taped], D. Patton, S. W. Cardiff [coll.], D. L. Dittmann; Cardiff 1995b, c, Stedman 1995; LSUMZ 161214)
- 9 Mar. 1986, Reserve (R. J. Stein; Imhof 1986)

TIMING OF BREEDING: Egg dates: 10 May 1959 (H. H. Jeter; ABF); 13 May 1951, Shreveport (H. H. Jeter; Lowery and Newman 1951b); 13 May 1951, between Bossier City and Barksdale Field (H. H. Jeter; Lowery and Newman 1951c).

DIET: The stomach contents of four specimens from Louisiana contained "insects" and "insects, small green caterpillars, 4 black fruit 4-5 mm diameter." The individual seen on 15 Dec. 1990 near Cameron was observed to mouth Chinese Tallow-Tree (*Sapium sebiferum*) fruits. Known elsewhere to be primarily insectivorous, at least during breeding season (Brown 1993).

TIMING OF MIGRATION: There are virtually no convincing records of spring transients. Breeding birds arrive on their Louisiana breeding territories at least as early as 28 Apr., probably earlier (H. H. Jeter; Lowery and Newman 1951b, ABF); they remain at their Louisiana breeding sites as late as 11 Sep. (J. R. Stewart; ABF). The Louisiana records away from the breeding grounds from late August to late September presumably represent south-bound fall migrants. No records exist from then until early November. We suspect that the records from November through winter represent a separate influx, possibly individuals that have been forced southward after attempting to winter farther north or that have straggled northeastward along the Gulf Coast from the Mexican winter range. The latter pattern is shown by many species with obvious Mexican origins (Cardiff and Remsen 1979), e.g., Buff-bellied Hummingbird (Amazilia yucatanensis), Groove-billed Ani (Crotophaga sulcirostris), Brown-crested Flycatcher (Myiarchus tyrannulus), and Vermilion Flycatcher (Pyrocephalus rubinus). Thus, we wonder whether individuals of other species that usually appear along the Gulf Coast long after their normal migration schedule at comparable latitudes also originate from Mexico rather than from farther north or west, e.g., all "western" humming birds, Ash-throated Flycatcher (Myiarchus cinerascens), and Black-headed Grosbeak (Pheucticus melanocephalus).

BARE PARTS: The two fall Louisiana specimens with bare-parts data, both immatures, were described as follows (male first): iris brown and dark brown; maxilla gray-brown and grayish-horn-brown; mandible pinkish-white and pale pinkish flesh; tarsi and toes bluish-gray and leaden blue. The female

from March had a dark brown iris, blackish-horn maxilla, pale grayish-flesh mandible, and leaden-blue tarsi and toes.

SUBSPECIES: The breeding population is presumably *V. b. bellii*, the form that breeds in the Great Plains and the Midwest (Blake 1968), but no specimens have been collected. The Sept. specimen is *V. b. bellii*. The January specimen is *V. b. medius* (Remsen et al. 1996), a subspecies that breeds in New Mexico and southwestern Texas south to north-central and northeastern Mexico (A.O.U. 1957, Blake 1968); the March specimen from Vermilion Parish is also *medius*.

UNSUBSTANTIATED, DUBIOUS, OR ERRONEOUS RECORDS: 31 Mar. 1930, Monroe (Lowery 1931); 23 June 1933, Houma (in Oberholser 1938); 24 Apr. 1933, Baton Rouge (in Oberholser 1938; that record not included by Lowery [1974] in his records from Baton Rouge area); (1-2) 9-10 Apr. 1955, Cameron (in Newman 1955c); 24 Apr. 1955, Cameron (in Newman 1955c); (4) 3 Apr. 1971, Hackberry (in Imhof 1971); (1-2) 25 Apr. - 9 May 1970, Johnsons Bayou (in Imhof 1970); 16 May 1972, Cameron (in Imhof 1972); 18 Mar. (no year, locality, or observer; in Lowery 1974); 1 Mar. 1979, Cameron (in Hamilton 1979); 17 Jan. 1975, Willow Is., Cameron (in Hamilton 1975); 17 Dec. 1989, Orleans (in Jackson 1990).

Blue-headed Vireo Vireo solitarius

STATUS AND HABITAT: Uncommon winter resident in southern and central Louisiana, rare in northern Louisiana, possibly only casual there after early winter. Found primarily in broadleaf forest, but also in chenier woods, tall second-growth, and well-wooded suburbs. Late winter birds seem to be found mainly in areas with live oaks, tall pines, or other evergreen trees (but quantitative data lacking).

SIGNIFICANT RECORDS:

late spring in southern Louisiana:

- (♂) 29 Apr. 1989, ca. 5 mi. E Cameron (P. McKenzie, J. V. Remsen [coll.], D. Magee; LSUMZ 138311)
- 29 Apr. 1997, Cameron (S. W. Cardiff; Cardiff 1997b)
- 2 May 1985, New Orleans (N. Nelkin; Purrington MS)
- (3) 3 May 1957, Cameron (J. P. Gee; Newman 1957b)
- 11 May 1989, "Peveto Beach Woods," *Cameron* (D. Patton [photo], C. Butterworth, T. A. Parker, G. Budney; Imhof 1989, Dittmann 1995; photo checked by S. W. Cardiff)

late spring in central Louisiana:

- 15 Apr. 1994, 3.7 mi. N St. Gabriel, *Iberville* (J. V. Remsen; Remsen et al. 1996)
- 18 Apr. 1993, 3.7 mi. N St. Gabriel, *Iberville* (J. V. Remsen; Remsen et al. 1996)

J. La. Ornith.

late spring in northern Louisiana:

- 3 May 1995, Shreveport (R. Seidler; ABF)
- 5 May 1951, Cross Lake, *Caddo* (H. H. Jeter; Lowery and Newman 1951b, ABF)
- 5 May 1987, Haynesville, *Claiborne* (C. E. Lyon)
- 8 May 1992, Ford Park, Shreveport (R. Seidler; ABF)
- 9 May 1981, Shreveport (H. H. Jeter, C. Lyon; ABF)

early fall in northern Louisiana:

- 18 Sep. 1994, Soda Lake WMA, NW of Shreveport (R. Seidler)
- 20 Sep. 1970, Natchitoches (R. B. Hamilton; ABF)

early fall in central Louisiana:

- 5 Oct. 1950, Baton Rouge (M. Moore; Lowery and Newman 1951a) early fall in southern Louisiana:
- 4 Sep. 1994, Cameron (G. Broussard, P. Conover [videotaped]; Cardiff 1995a, Jackson 1995)
- 12 Sep. 1959, 4 mi. SE Cameron (J. P. Gee; ABF)
- 13 Sep. 1953, 4 mi. SE Cameron (J. P. Gee, M. B. Eyster; ABF)
- (im. \circlearrowleft) 20 Sep. 1987, Garner Ridge, 3 mi. W Johnsons Bayou School, *Cameron* (D. L. Dittmann, S. W. Cardiff [coll.]; Purrington 1988; LSUMZ 135161)
- (im. 6) 29 Sep. 1990, 5 mi. E Cameron (S. W. Cardiff; LSUMZ 157045)
- 3 Oct. 1987, "E. Jetty Woods," ca. 2 mi. S Cameron (S. W. Cardiff; ABF)
- (♂) 4 Oct. 1988, Willow Island, ca. 7 mi. E Cameron (S. W. Cardiff; Purrington 1989; LSUMZ 138312)

WINTER SOCIAL SYSTEM: Although a characteristic member of mixed-species flocks in its tropical winter range (references in Bent 1950; Stiles and Skutch 1989), we can find few clear statements to this effect for North American wintering populations. In fact, Imhof (1976a) stated that in Alabama it "rarely joins the loose bands of titmice and other small insect-eaters." In contrast, Stevenson and Anderson (1994) reported that in Florida that "1 or 2 individuals often associate with winter flocks " of small insectivores. This matches our experience in Louisiana, where in winter, this species is almost always found in mixed-species flocks with Carolina Chickadee (*Poecile carolinensis*), Tufted Titmouse (*Baeolophus bicolor*), Blue-gray Gnatcatcher (*Polioptila caerulea*), Pine Warbler (*Dendroica pinus*), kinglets (*Regulus* spp.), and other small insectivores; seldom is there more than one individual per flock.

DIET: LSUMZ Louisiana specimens with stomach contents noted on the labels are as follows: arthropods only (15, including one with 2 brownish caterpillars, 30 and 10 mm long, and one with 1 pentatomid) and arthropods + fruit parts (2). In winter, individuals have been noted eating the fruit of

Greenbriar (*Smilax* sp.) (B. Fontenot 1998) and Poison Ivy, and the wax coating of the fruit of Chinese Tallow-Tree (*Sapium sebiferum*).

TIMING OF MIGRATION: In coastal Cameron, individuals begin to arrive in late September, but no peak in numbers is detected until mid-December. This peak coincides with the Christmas Count period and its intensive field activity and so may be a sampling artifact; however, no such peak is seen for White-eyed Vireo, leading us to suspect that the mid-December peak may be real (Remsen et al. 1996). Curiously, most early fall dates are from the coast, rather than inland, where birds typically do not arrive until the last 10 days of October (Remsen et al. 1996.).

In spring, as in many land-bird species that winter in Louisiana, there is little evidence of any major movements. Near St. Gabriel, an increase in frequency of detection from the second week of March to early April (Remsen et al. 1996) may represent an influx of spring migrants.

HIGH COUNTS:

fall/early winter: 17, 17 Dec. 1988, "E. Jetty Woods," ca. 2 mi. S Cameron (S. W. Cardiff, C. L. Cummins, C. A. Marantz, J. V. Remsen); 10, 15 Dec. 1990, "E. Jetty Woods," ca. 2 mi. S Cameron (J. V. Remsen, S. W. Cardiff, A. W. Kratter, G. H. Rosenberg).

late winter: 5, 26 Jan. 1994, Venice area (S. W. Cardiff, D. L. Dittmann). spring: 5, 26 Mar. 1992, *Cameron* (C. A. Marantz, A. W. Kratter).

BARE PARTS: (N = 19) <u>Iris</u>: dark brown, brown. <u>Maxilla</u>: black, blackish, dark gray, dark slate; four females described as also having pale tomia. <u>Mandible</u>: usually (always?) bicolored, with a pale base (gray, blue-gray, leaden blue, pale leaden blue, pale gray, silver-horn) and dark tip (varying in extent from just the tip to the distal half; black, blackish, dark gray, dark slate, horn-brown). <u>Tarsi and toes</u>: blue-gray, gray, leaden blue, slate gray, dark gray (one bird with toes described as more bluish than tarsi).

BODY MASS: Our data (Appendix 1) suggest that differences in body mass among fat classes might not be as great in Blue-headed Vireo as in other vireos; the absence of any individuals in the two highest fat classes is also striking, given that species with much smaller sample sizes have multiple individuals in the highest categories.

SUBSPECIES: Louisiana birds are primarily the widespread "Blue-headed Vireo" of eastern North America, *V. s. solitarius*. However, *V. s. alticola* (the subspecies that breeds in the Appalachians; it is similar to typical "Blue-headed Vireo" of the eastern United States, but its bill is longer and wider, and its back is usually clouded with slaty) has also been recorded: 7 LSUMZ and USNM specimens (Remsen et al. 1996), 18 Nov. - 30 Mar., all from a limited area of eastern Louisiana: *W. Baton Rouge*, *E. Baton Rouge*, *W. Feliciana*, *Livingston*, *Orleans* (2), and *Washington* (2).

UNSUBSTANTIATED, DUBIOUS, OR ERRONEOUS RECORDS: 1 Aug. 1893, New Orleans (in Oberholser 1938); 3 Aug. 1902, Diamond, *Plaquemines* (in Oberholser 1938).

[?Cassin's Vireo Vireo cassinii]

STATUS AND HABITAT: One record, from fall in southwestern Louisiana. Although the authors think that the identification as Cassin's Vireo is correct, at least one other expert thinks that the specimen is an unusually dull Blue-headed Vireo. Genetic analyses of the specimen are planned, and so the controversy will should be resolved soon.

RECORDS:

• (im or) 20 Sep. 1987, Garner Ridge, 3 mi. W Johnsons Bayou School, Cameron (D. L. Dittmann, S. W. Cardiff{coll.}; Purrington 1988; LSUMZ 135161).

DIET: The Louisiana specimen's stomach contained insect parts, including a large green caterpillar.

BARE PARTS: (N = 1) <u>Iris</u>: dark brown. <u>Maxilla</u>: black. <u>Mandible</u>: gray, blending to black top. <u>Tarsi and toes</u>: leaden blue.

NOTE: We follow the AOU (1998) in treating this taxon as a full species.

Plumbeous Vireo Vireo plumbeus

STATUS AND HABITAT: One record, from fall in southwestern Louisiana.

RECORDS:

• (im Q) 16 Sep. 1984, Hackberry Ridge, 2 mi. WSW Johnsons Bayou School, Cameron (J. V. Remsen; Purrington 1985, Schulenberg 1988; LSUMZ 118774; identification confirmed by Allan R. Phillips, Ned K. Johnson; Remsen et al. 1996).

DIET: The Louisiana specimen's stomach contained insect parts.

BARE PARTS: (N = 1) <u>Iris</u>: dark brown. <u>Maxilla</u>: black. <u>Mandible</u>: leaden blue with distal third black. <u>Tarsi and toes</u>: leaden blue.

SUBSPECIES: The Louisiana specimen is V. p. plumbeus of the western United States and most of Mexico (sensu Phillips 1991).

NOTE: See Johnson (1995) for reasons for treatment of this taxon as a species separate from Solitary Vireo.

Yellow-throated Vireo Vireo flavifrons

STATUS AND HABITAT: Uncommon breeding species in central and northern Louisiana; rare to casual breeder in southern Louisiana. In migration, uncommon state-wide; even in major spring "fall-outs" of migrants on the coast, seldom are more than 5-10 individuals seen in a day. However, high counts from

Grand Isle (see below) suggest that spring migrants are more common on the southeastern coast than on the southwestern coast, where the high count from 91 day-long surveys in Cameron from 18 March to 14 May is only 12 individuals (Remsen et al. 1996). Preferred breeding habitats are characterized by tall trees in open woodland (see below for details). Does not breed in continuous, closed-canopy forest, where it seems to be replaced by Red-eyed Vireo. In migration, more widespread, but still prefers treetops.

The breeding habitat of the Yellow-throated Vireo in the United States is typically described as mainly or primarily mature deciduous forest (e.g., Mengel 1965, Sutton 1967, Sprunt and Chamberlain 1970, Imhof 1976a, Dinsmore et al. 1984, Graber et al. 1985, James and Neal 1986, Bohlen 1989, Peterjohn 1989, Robbins 1991, Robbins and Easterla 1992). Williamson (1971) found that in Maryland, Yellow-throated Vireo occupied higher strata of the forest than Red-eyed Vireo. Bent (1950), however, reported that in Massachusetts, Yellow-throated Vireo was not really a forest species but an "edge" species. Likewise, Godfrey (1966) considered it a bird of "open stands of mature deciduous trees," and Stevenson and Anderson (1994) described its Florida breeding habitat as "open hardwoods and mixed woodlands." Our experience with Yellow-throated Vireo in Louisiana differs from that of most authors and is in accord with Bent, Godfrey, and Stevenson and Anderson. Although certainly a high-canopy species, it is not found in continuous, closedcanopy forests. Instead, we find it in three situations: (1) forest edge, especially where tall trees are isolated from the main body of forest; (2) open pine woodland mixed with tall hardwoods; and (3) the periphery of large tree-falls within continuous forest. On 1 June 1983 at the Tensas National Wildlife Refuge, Madison Parish, Remsen and R. B. Hamilton walked for 7 hours through about 10 linear km of mainly continuous, mature, bottomland forest and counted 65 singing Red-eyed Vireos and only 3 Yellow-throated Vireos; the latter were found at tree-falls large enough to create a substantial sunny edge within the forest. Yellow-throated Vireo is a much less common bird than Redeved Vireo throughout its range, including during migration on the Louisiana coast, where the ratio of Yellow-throated to Red-eyed records in our surveys (Remsen et al. 1996) during their overlap period in spring is 130:1533, or about 1:12. Thus, we suspect that the true habitat of Yellow-throated Vireo is much more restricted than simply "forest" and that careful observations will show that the species is found primarily in edge situations.

There are no documented records after early November, much less in winter. Although there are numerous sight records from early November through the winter (not only in Louisiana but in many other southern states), these almost certainly refer to bright male Pine Warblers or, less commonly, Yellow-breasted Chats (see Remsen et al. 1996).

Although currently considered a transient only in the New Orleans area (Purrington MS), records from the early part of the century in late May and June suggest that it nested there occasionally (H. H. Kopman; Oberholser 1938).

SIGNIFICANT RECORDS:

early spring in southern Louisiana:

- 14 Mar. 1991, New Orleans (D. P. Muth; Muth 1991)
- 15 Mar. 1953, New Orleans (H. B. Chase; ABF)
- (O) 17 Mar. 1941, New Orleans (T. D. Burleigh; LSUMZ 4812)
- 19 Mar. 1955, Kenner, *Jefferson* (H. B. Chase; ABF) early spring in central Louisiana:
- 12 Mar. 1952, Bains, W. Feliciana (J. Bruns; ABF)
- (♂) 12 Mar. 1962, Baton Rouge (Mrs. G. C. Taylor; LSUMZ 27669, exchanged by G. H. Lowery, Jr. to Estación Biología de Rancho Grande, Venezuela)
- (O) 13 Mar. 1943, Hoo-Shoo-Too, E. Baton Rouge (A. W. Burdick; Lowery 1947, LSUMZ 7887)
- (♂) 18 Mar. 1945, Baton Rouge (T. D. Burleigh; USNM 379654)
- 21 Mar. 1992, 3.7 mi. N St. Gabriel, *Iberville* (J. V. Remsen; Remsen et al. 1996)
- (♂) 22 Mar. 1942, 6 mi. W Baton Rouge, W. Baton Rouge (M. L. Miles: LSUMZ 13663)

early spring in northern Louisiana:

- 13 Mar. 1972, Natchitoches (R. B. Hamilton; ABF)
- 17 Mar. 1953, near Shreveport (H. H. Jeter; ABF)
- (2) 26 March 1995, Allen Quad, Natchitoches (C. E. Lyon)
- 31 Mar. 1929, Monroe (Lowery 1931)
- 31 Mar. 1996, west of Ruston, Lincoln (R. Seidler, V. LeFevers)

late spring in southern Louisiana:

- (Q) 6 May 1990, "East Jetty Woods," 2 mi. S Cameron (S. W. Cardiff; LSUMZ 152126)
- 14 May 1997, Cameron (S. W. Cardiff; Cardiff 1997b)
- 16 May 1891, New Orleans (Oberholser 1938; specimen collected, whereabouts unknown)
- 16 May 1993, Grand Isle (A. E. Smalley, G. B. Smalley; ABF)
- 16 May 1997, New Orleans (R. D. Purrington; Cardiff 1997b)
- 20 May 1997, N. Breton Island, *Plaquemines* (P. Yaukey, D. P. Muth; Cardiff 1997b)

late spring migrants or breeding season wanderers:

• (♂) 2 June 1982, Hackberry Ridge, 2 mi. WSW Johnsons Bayou School, *Cameron* (J. V. Remsen; Jackson 1982; LSUMZ 105521)

- 11 June 1982, Barataria Unit, Jean Lafitte Nat. Hist. Park (R. D. Purrington, J. Reinoehl, D. P. Muth, N. Nelkin; Purrington MS)
- early fall in southern Louisiana:
- 4 Aug. 1937, New Orleans (T. D. Burleigh; Oberholser 1938; USNM 341370)

late fall northern Louisiana:

- 15 Oct. 1989, Bickham-Dickson park (C. E. Lyon)
- (2) 17 Oct. 1993, Richard Fleming Park, Shreveport (R. Seidler; ABF)
- 30 Oct. 1993, Richard Fleming Park, Shreveport (R. Seidler; ABF)

late fall central Louisiana:

- 7 Oct. 1996, Acadiana Park, Lafayette (P. Conover)
- 24 Oct. 1993, 3.7 mi. N St. Gabriel (J. V. Remsen; ABF)

late fall southern Louisiana:

- (Q) 25 Oct. 1987, East Jetty Woods, 2 mi. S Cameron (S. W. Cardiff, D. L. Dittmann; LSUMZ 135163)
- (u) 27 Oct. 1984, Garner Ridge, 3 mi. W Johnsons Bayou School (T. S. Schulenberg; LSUMZ 122552)
- 28 Oct. 1972, Johnsons Bayou (R. B. Hamilton; Purrington 1973)
- (Q) 28 Oct. 1984, Hackberry Ridge, 2 mi. WSW Johnsons Bayou School (S. W. Cardiff; LSUMZ 121885)
- 28 Oct. 1985, Barataria Unit, Jean Lafitte Nat. Hist. Park (D. P. Muth; ABF)
- (♂) 31 Oct. 1940, New Orleans (T. D. Burleigh; USNM 364037)
- 2 Nov. 1985, Barataria Unit, Lafitte Nat. Hist. Park (D. P. Muth, C. Lyon; ABF)
- 3 Nov. 1985, City Park, New Orleans (A. E. Smalley, G. B. Smalley; Purrington 1986)
- 4 Nov. 1984, New Orleans (P. Wallace; Purrington MS)

DIET: Perhaps the most insectivorous of Louisiana vireos; no records of frugivory. LSUMZ stomach contents: arthropods (N = 7, including one with caterpillars and Coleoptera)

TIMING OF MIGRATION: Except at Grand Isle, seldom are more than a few individuals seen, even in major fall-outs, and so peaks are difficult to detect. The Grand Isle high counts suggest that roughly the last 10 days of March and first 10 days of April represent the peak of spring migration. Peak counts on the *Cameron* coast, however, are from extreme late March to late April (Remsen et al. 1996), suggesting that migration there may be slightly later. Additionally, none of the early dates for spring migrants (see above) are from the southwestern coast despite intensive coverage there. Inland, near St. Gabriel, the first influx is typically noted in the third week of March, but no peaks are detected (Remsen et al. 1996). Extremely scarce on *Cameron* coast in fall, with no peaks detectable during a protracted migration period from late

August to late October (Remsen et al. 1996). Inland, near St. Gabriel, no fall peak is detected, and most birds have left by late September, substantially earlier than on the coast (Remsen et al. 1996).

HIGH COUNTS:

SPRING MIGRATION: **200** (exceptional), 8 Apr. 1961, Grand Isle (S. A. Gauthreaux; Newman 1961b); **50**, 11 Apr. 1978, Grand Isle (M. Myers, N. Nelkin, J. Reinoehl; ABF); **35**, 21 Mar. 1992, Grand Isle (M. Weber, R. J. Stein, R. F. Cambre; ABF).

BREEDING: 15,31 May 1986, Plettenberg BBS, W. Feliciana (P. McKenzie, E. M. Butler); 13, 4 June 1983, Plettenberg BBS, W. Feliciana (P. McKenzie, E. M. Butler); 9, 27 May 1994, Atchafalaya River BBS, St. Martin & Pointe Coupee (J. V. Remsen, A. W. Kratter).

<u>FALL MIGRATION</u>: **6**, 29 Aug. 1986, Grand Isle (A. E. Smalley, G. B. Smalley; ABF); **3**, 9 Sept. 1995, Shreveport (R. Seidler; ABF); no other record of more than 2/day.

BARE PARTS: (N = 9). <u>Iris</u>: dark brown. <u>Maxilla</u>: black, sometimes with bluish edges; gray with black culmen. <u>Mandible</u>: usually bicolored, leaden blue or gray at base blending to distal third dark gray or black; one all-leaden-blue. <u>Tarsi and toes</u>: leaden blue, gray, or blue-gray.

BODY MASS: Our data (Appendix 1) show that individuals may be able to increase their mass by more than 50% by addition of subcutaneous fat. Dunning's (1993) mean mass of 18.0 g seems high compared to our individuals with "no" or "light" fat, but more data are needed.

UNSUBSTANTIATED, DUBIOUS, OR ERRONEOUS RECORDS: 2 Mar. 1870, Rigolets, *Orleans* (Oberholser 1938; specimen collected, whereabouts unknown); "at least five records in December, January, and February ... from the southern part of the state" (Lowery 1974); 25 Jan. 1958, Thibodaux (in Newman 1959b); 3-8 Feb. 1961, Baton Rouge (in Newman 1961a); 23 Dec. 1962 (New Orleans CBC; in James 1963); 10 Feb. 1974, St. Francisville (in Hamilton 1974); (2 - not even bold-faced as unusual, no details) 18 Dec. 1974 (Monroe CBC); (2) 19 Dec. 1982 (Pine Prairie CBC; also in Ortego 1983); 2 Jan. 1984 (Grand Isle CBC; also in Myers and Muth 1984); 22 Dec. 1984 (Baton Rouge CBC; also in Newman 1985); 18 Dec. 1988 (Pine Prairie CBC).

Warbling Vireo Vireo gilvus

STATUS AND HABITAT: Currently a rare spring migrant and casual fall migrant along southwestern coast in chenier woods, and a rare to uncommon spring migrant in northwestern Louisiana. Only a few records from elsewhere in the state in the last 20 years. This pattern of geographic occurrence strongly suggests that it is a circum-Gulf migrant. Casual in southern Louisiana in winter.

Formerly a fairly common breeding bird in Louisiana but now evidently nearly extirpated for unknown reasons (Remsen et al. 1996). The only recent presumed breeding birds have been found in cottonwood-willow associations in *Pointe Coupee*.

SIGNIFICANT RECORDS:

early spring in southern Louisiana:

- 9 Apr. 1925, New Orleans (Oberholser 1938)
- (2) 12 Apr. 1959, Grand Isle (S. A. Gauthreaux; Newman and Warter 1959)
- (3) 14 Apr. 1995, "Peveto Beach Woods," *Cameron* (B. Fontenot; Cardiff 1995c)
- 16 Apr. 1961, Venice (M. Myers et al.; ABF)
- (2) 16 Apr. 1985, "Peveto Beach Woods," Cameron (P. McKenzie; ABF)
- 17 Apr. 1989, "Peveto Beach Woods," Cameron (R. Bacon; ABF)
- 17 Apr. 1993, Grand Isle (M. Myers, C. Sorrells; ABF)
- (4) 18 Apr. 1959, Grand Isle (S. A. Gauthreaux; Newman and Warter 1959) early spring in northern Louisiana:
- (2) 1 Apr. 1956, near Shreveport (H. H. Jeter; ABF)
- 5 Apr. 1930, Monroe (Lowery 1931)
- 7 Apr. 1931, Monroe (Lowery 1931)
- 15 Apr. 1929, Shreveport (H. H. Kopman; Oberholser 1938) late spring:

• 10 May 1989, Bickham-Dickson park (C. E. Lyon)

- 13 May 1995, Wallace Lake, Caddo (C. E. Lyon)
- (6, at least 1 or) 19 May 1986, Johnsons Bayou area (G. H. Rosenberg, W. Howe; Imhof 1986; LSUMZ 130585)

recent spring away from western tier of parishes

- 12 Apr. 1983, Comite River, E. Baton Rouge (P. McKenzie, V. Yurkunas; ABF)
- (2) 24-25 Apr. 1995, ca. 5 mi. E Carencro, Lafayette (B. Fontenot; Cardiff 1995c)
- 26 Apr. 1996, 3.7 mi. N St. Gabriel (J. V. Remsen; Muth 1996, Cardiff 1997c)
- 25 Apr. 1998, 4 mi. N St. Gabriel (DLD, SWC)

recent summer:

- 9 June 1984, Plettenberg Road, W. Feliciana (P. McKenzie, M. Butler; ABF)
- (singing) 22 May 1994, ca. 2 mi. S Krotz Springs, Atchafalaya R., *St. Landry* (D. P. Muth, M. Myers, C. Sorrells, G. B. Smalley; Muth et al. 1994, ABF)
- (3) 19 May 1995, East Point Quad, Red River (H. H. Jeter, C. E. Lyon).
- (singing) 21 May 1995, Chamblee Quad, Tensas (P. Dickson)

J. La. Ornith.

- 7 May and 8 June 1995, near Gilliam, Caddo (R. Seidler)
- 19 May and 7 June 1995, Lac Sainte Agnes Quad, *Avoyelles* (D. A. Wiedenfeld)
- 31 May 1996, *Rapides* (R. J. Breedlove; Muth 1996)

fall (away from breeding localities):

- 27 Aug. 1995, Peveto Beach Woods (P. Wallace, C. Sorrells; Cardiff 1996)
- (im. \circlearrowleft) 30 Aug. 1986, 0.5 mi. N Johnsons Bayou School (D. P. Muth, S. W. Cardiff [coll.], D. L. Dittmann; Purrington 1987; LSUMZ 131145)
- (5) 3 Sep. 1956, Shreveport area (J. R. Stewart, M. Turk; Newman 1957a, ABF)
- (im. Q) 6 Sep. 1987, *Cameron* (K. V. Rosenberg; Purrington 1988; LSUMZ 135155)
- (im. \mathcal{O} , \mathcal{Q}) 13 Sep. 1987, Garner Ridge, 3 mi. W Johnsons Bayou School (S. W. Cardiff, D. L. Dittmann; LSUMZ 135156-57)
- 14 Sep. 1960, New Orleans (S. A. Gauthreaux; Purrington MS)
- 15 Sep. 1986, Garner Ridge, 3 mi. W Johnsons Bayou School (S. W. Cardiff; ABF)
- 15 Sep. 1995, Ft. Jackson, *Plaquemines* (D. L. Dittmann, S. W. Cardiff; Cardiff 1996)
- (2) 19 Sep. 1987, Willow Island, ca. 7 mi. E Cameron (S. W. Cardiff, D. L. Dittmann; ABF)
- (2 im. Q) 19 Sep. 1987, "E. Jetty Woods," ca. 2 mi. S Cameron (S. W. Cardiff, D. L. Dittmann; LSUMZ 135159-135160)
- (ad. Q) 20 Sep. 1987, Garner Ridge, 3 mi. W Johnsons Bayou School, *Cameron* (S. W. Cardiff, D. L. Dittmann; LSUMZ 135158)
- 22 Sep. 1987, Whiskey Bay Road, *Iberville* (J. B. Dunning, R. Bowers; ABF)
- 25 Sep. 1994, "Peveto Beach Woods," *Cameron* (D. L. Dittmann, S. W. Cardiff; Cardiff 1995)
- 30 Sep. 1984, Hackberry Ridge, 2 mi. WSW Johnsons Bayou School (D. P. Muth; ABF)
- 3 Oct. 1948, River Road, Baton Rouge (R. Moore; Lowery 1949, ABF)
- 12 Oct. 1986, East Jetty Woods, ca. 2 mi. S Cameron (D. L. Dittmann, S. W. Cardiff; ABF)
- (im. \circlearrowleft) 12 Oct. 1990, ca. 5 mi. E Cameron (S. W. Cardiff, D. L. Dittmann; LSUMZ 152134)
- (2) 15 Oct. 1959, New Orleans (S. A. Gauthreaux; Newman 1960a)
- 8 Nov. 1996, Lafayette (P. E. Conover, D. Patton; Jackson 1997, Cardiff 1997d)

early winter records:

- 11 Nov. 1994, Ft. Jackson, *Plaquemines* (S. W. Cardiff, D. L. Dittmann; Cardiff 1995a, Jackson 1995)
- 24 Nov. 1961, Venice (S. A. Gauthreaux; ABF)
- 19 Dec. 1990, Bayou Grand Marais area, *Vermilion* (G. H. Rosenberg; Crowley CBC)

winter records:

- 26 Dec. 1993 22 Jan. 1994, near Creole, *Cameron* (PC; videotape examined by authors)
- (Q) 26 Jan. 1994, 1/2 mi. S Ft. Jackson, *Plaquemines* (S. W. Cardiff, D. L. Dittmann; Stedman 1994; LSUMZ 159815)

DIET: Primarily insectivorous. LSUMZ stomach contents: arthropods only (N= 9, including 1 with Coleoptera, 2 with caterpillars). The bird attempting to winter near Creole was observed to mouth Chinese Tallow-Tree fruits (B. Vermillion, fide B. Fontenot).

TIMING OF MIGRATION: Late dates for this species in its former breeding areas were 30 August in the Baton Rouge region (Lowery 1947) and 7 September in Monroe (Lowery 1931). Peak numbers on the *Cameron* coast in spring are typically in the last 10 days of April. So few fall records exist that timing in fall is difficult to judge; perhaps mid-September is the peak.

HIGH COUNTS:

<u>SPRING MIGRATION</u>: **10**, 2 May 1995, Bickham-Dickson park (C. E. Lyon); **6**, 20 Apr. 1986, *Cameron* (P. Lehman et al.; Imhof 1986); **4**, 28 Apr. 1990, ca. 5 mi. E Cameron (T. A. Parker, S. W. Cardiff; ABF).

BREEDING: 3, 19 May 1995, East Point Quad, *Red River* (H. H. Jeter, C. E. Lyon).

BARE PARTS: (N = 9) <u>Iris</u>: dark brown. <u>Maxilla</u>: black, brownish black, dark grayish brown. <u>Mandible</u>: variable, none evenly colored, with pale (whitish, blue-gray, pale blue-gray, pale flesh) bases blending to dark (gray, gray-brown, brown, gray horn-brown, blackish gray) tips, often with lateral streaks. <u>Tarsi and toes</u>: leaden blue, blue-gray.

BODY MASS: Even with a small sample size, our data (Appendix 1) suggest that individuals may be able to increase their mass by at least 50% by addition of subcutaneous fat.

SUBSPECIES: All specimens except two are of the widespread eastern USA subspecies, *V. g. gilvus*. There are two records (Remsen et al. 1996) of *V. g. swainsonii*, the breeding form of much of western USA except the Great Basin:

• (Q) 13 Sep. 1987, Garner Ridge, 3 mi. W Johnsons Bayou School (S. W. Cardiff; LSUMZ 135157)

• (Q) 26 Jan. 1994, 1/2 mi. S Ft. Jackson, *Plaquemines* (S. W. Cardiff, D. L. Dittmann; Stedman 1994; LSUMZ 159815)

The larger, grayer subspecies of the Rocky Mountain region, *V. g. brewsteri*, will almost certainly be found eventually as a vagrant in Louisiana.

UNSUBSTANTIATED, DUBIOUS, OR ERRONEOUS RECORDS: 23 Oct. 1908, Southwest Reef Lighthouse, *Plaquemines* (in Oberholser 1938); 4 Mar. 1918, Chenier au Tigre, *Vermilion* (in Oberholser 1938, Lowery 1974); 2 Apr. 1918, Laplace (in Oberholser 1938); 26 Mar. (no year), Baton Rouge region (in Lowery 1947); (2) 4 Nov. 1959, Grand Isle (in Newman 1960a); 31 May 1996, near Holloway, *Rapides* (Cardiff 1997c).

Philadelphia Vireo Vireo philadelphicus

STATUS AND HABITAT: In spring, uncommon migrant on coast (fairly common some springs in *Cameron*), rare to casual inland. In fall, uncommon to fairly common migrant inland, rare on coast. One early -winter and one latewinter record. Found primarily in deciduous forest, also in coastal chenier woods.

SIGNIFICANT RECORDS:

early spring in southern Louisiana:

- 20 Apr. 1986, *Cameron* (S. W. Cardiff; Remsen et al. 1996) early spring in central Louisiana:
- 12 Apr. 1983, Comite River, *E. Baton Rouge* (P. McKenzie, M. M. Swan, V. Yurkunas; ABF)
- (2) 21 Apr. 1993, 4 mi. N St. Gabriel (D. L. Dittmann; Muth 1993) early spring in northern Louisiana:
- 10 Apr. 1958, Shreveport (J. R. Stewart; ABF)
- 26 Apr. 1989, Cross Lake, *Caddo* (C. E. Lyon)

late spring in southern Louisiana:

- 16 May 1971, New Orleans (R. D. Purrington; Imhof 1971)
- (2) 20 May 1989, "East Jetty Woods," ca. 2 mi. S Cameron (S. W. Cardiff, D. L. Dittmann; ABF)
- (Q) 20 May 1993, "East Jetty Woods," 2 mi. S Cameron (S. W. Cardiff; LSUMZ 159132)
- 21 May 1988, Hackberry Ridge, 2 mi. WSW Johnsons Bayou School (K. V. Rosenberg; Imhof 1988, ABF)

late spring in northern Louisiana:

- (4) 18 May 1960, Shreveport (J. R. Stewart; Newman 1960b)
- (2) 22 May 1993, Spring Lake (C. E. Lyon)
- 30 May 1970, near Shreveport (H. H. Jeter; Imhof 1970)

early fall in northern Louisiana:

• 15 Sep. 1990, Bickham-Dickson park (C. E. Lyon)

- 21 Sep. 1991, Bickham-Dickson park (C. E. Lyon) early fall in central Louisiana:
- (Q) 14 Sep. 1940, 5 mi. S University, E. Baton Rouge (E. Wallace; LSUMZ 4253)
- 14 Sep. 1995, 5 mi. S University, E. Baton Rouge (D. F. Lane, J. Babin; Jackson 1996, ABF)

early fall in southern Louisiana:

- 12 Sep. 1987, Grand Isle (N. Nelkin, A. E. Smalley, G. B. Smalley; Purrington 1988)
- 13 Sep. 1964, New Orleans (S. A. Gauthreaux; Purrington MS)
- 14 Sep. 1991, City Park, New Orleans (P. Yaukey; ABF)

late fall in northern Louisiana:

- 15 Oct. 1989, Bickham-Dickson park (C. E. Lyon)
- 16 Oct. 1993, Bickham-Dickson park (C. E. Lyon)

late fall in central Louisiana:

- 4 Nov. 1990, 3.7 mi. N St. Gabriel (J. V. Remsen; ABF)
- 6 Nov. 1996, Lafayette (P. E. Conover; Cardiff 1997d)

late fall in southern Louisiana:

- (ad. σ) 5 Nov. 1989, "Peveto Beach Woods," *Cameron* (K. V. Rosenberg, T. S. Sillett, R. T. Brumfield; LSUMZ 152133)
- 9 Nov. 1985, Orleans (N. Nelkin; Purrington 1986)
- 12 Nov. 1968, Venice (K. P. Able; Purrington 1969)
- (im. Q) 13 Nov. 1983, Hackberry Ridge, 2.5 mi. WSW Johnsons Bayou School (T. A. Parker, J. V. Remsen; Purrington 1984; LSUMZ 113120) early winter records:
- 3 Dec. 1960, Peveto Beach, *Cameron* (S. A. Gauthreaux; Newman 1961a, Lowery 1974)

late winter records:

• (Q) 5 Feb. 1961, Buras, *Plaquemines* (S. A. Gauthreaux; Newman 1961a, Gauthreaux 1962; LSUMZ 23778); this is one of the only valid winter records of this species for the United States.

DIET: Primarily insectivorous in spring; in fall, insectivorous but also adds fruit to diet, e.g. Spicebush, Virginia Creeper (*Parthenocissus quinquefolia*; B. Fontenot, pers. comm.), Roughleaf Dogwood (*Cornus drummondii*). LSUMZ stomach contents: arthropods only (N=21); arthropods with fruit seeds or parts (N=6); and fruit seeds or parts (N=1); 9 stomachs contained caterpillars, up to 35 mm long. All but one of the stomachs containing fruit were from inland Louisiana in fall.

TIMING OF MIGRATION: Spring migration in coastal *Cameron* peaks in late April and early May. In fall, Lowery (1974) indicated the species was "uncommon" starting 2 August, becoming "common" in late August and

remaining common through mid-October, and then remaining "uncommon" to late October. This conflicts drastically with our experience over the last 15 years. We believe that Lowery erred in placing faith in unsubstantiated old records from early August. Our data (Remsen et al. 1996) show that peaks inland near St. Gabriel from late September to late October, and migrants in coastal Cameron are found primarily during the same period. This timing is consistent with data from adjacent states (Remsen et al. 1996).

HIGH COUNTS:

SPRING MIGRATION: **50**, 7 May 1960, Shreveport (J. R. Stewart; Newman 1960b); **40**, 6 May 1990, *Cameron* (S. W. Cardiff, D. L. Dittmann, C. A. Marantz; Jackson 1990); **25**, 30 Apr. 1989, ca. 5 mi. E Cameron (S. W. Cardiff, D. L. Dittmann; ABF).

FALL MIGRATION: **10**, 4 Oct. 1987, Manchac Point, *Iberville* (J. V. Remsen, J. M. Bates, K. V. Rosenberg); **8**, 1 Oct. 1986 *Cameron* (S. W. Cardiff; Remsen et al. 1996); **5**, 11 Oct. 1987, Manchac Point, *Iberville* (J. V. Remsen, S. W. Cardiff, D. L. Dittmann, P. P. Marra).

BARE PARTS: (N = 24) <u>Iris</u>: dark brown, brown, or chocolate. <u>Maxilla</u>: black, blackish, brownish black, dark slate, or dark brown (occasionally with pale tomium). <u>Mandible</u>: variable, almost always paler than maxilla; main color ranges from gray, blue-gray, dark slate, and leaden blue to pale horn, silvery blue, and whitish; about half described as evenly colored, the others not, often with darker tips, and occasionally with lateral streaks or paler bases (occasionally with pale tomium). <u>Tarsi and toes</u>: gray, blue-gray, leaden gray, leaden blue, dark leaden blue, or blue-slate.

BODY MASS: Our data (Appendix 1) show that individuals may be able to increase their mass by nearly 100% by addition of subcutaneous fat. Dunning's (1993) mean mass of 12.2 g is high compared to our individuals with "no" or "light" fat, and because his sample came from a locality where only migrants are expected, it is almost certainly biased by inclusion of fat individuals.

UNSUBSTANTIATED, DUBIOUS, OR ERRONEOUS RECORDS: 2 Aug. 1893, Hester, *St. James* (in Oberholser 1938; "specimen" whereabouts unknown); ("a few individuals") "late in July" 1893, Covington. *St. Tammany* (in Oberholser 1938); ("abundant") 2 Aug. 1893, Covington. *St. Tammany* (in Oberholser 1938); 24 August (no year), Baton Rouge region (in Lowery 1947); (2) 9 Apr. 1955, *Cameron* (in Newman 1955c); 25 Mar. 1961, Grand Isle (in Newman 1961b); 17 Dec. 1977 (Sabine NWR CBC).

Red-eyed Vireo Vireo olivaceus

STATUS AND HABITAT: Common breeding species in northern and central Louisiana; in southern Louisiana, uncommon to fairly common in

Mississippi and Atchafalaya basins, but rare elsewhere. In migration, uncommon to fairly common inland, and on coast, uncommon to abundant in spring, and uncommon to common in fall. Casual in early winter on coast. Breeds primarily in mature deciduous forest or riparian forest dominated by cottonwoods; casual breeder in coastal woods. Migrants may be found anywhere with trees or shrubs, although records from pine woods are few.

SIGNIFICANT RECORDS:

early spring in southern Louisiana:

- 16 Mar. 1985, Grand Isle (R. D. Purrington, N. Nelkin; Purrington MS)
- 18 Mar. 1894, New Orleans area (Beyer 1900)
- 18 Mar. 1961, City Park, New Orleans (H. B. Chase; ABF)
- (20) 21 Mar. 1972, Grand Isle (M. Weber, R. J. Stein, R. F. Cambre; ABF)
- 21 Mar. 1991, Barataria Unit, J. Lafitte Nat. Hist. Park (D. P. Muth; ABF)
- (♂) 26 Mar. 1992, Willow Island, ca. 7 mi. E Cameron (A. W. Kratter; LSUMZ 154278)

early spring in central Louisiana:

- 18 Mar. 1978, e. of Bayou Pigeon, St. Martin (J. A. Jackson, C. D. Cooley; ABF)
- 19 Mar. 1871, Mandeville (in Oberholser 1938; specimen no longer extant, but examined by Oberholser in TU collection)
- 20 Mar. 1949, Amite River near Clinton, E. Feliciana (R. Moore; ABF)
- 21 Mar. 1991, 3.7 mi. N St. Gabriel (J. V. Remsen; Cardiff 1991)
- 22 Mar. 1933, Baton Rouge (G. H. Lowery, Jr.; Oberholser 1938)
- (♂) 22 Mar. 1944, 6 mi. S Erwinville, *W. Baton Rouge* (M. L. Miles; Lowery 1947, LSUMZ 6589)
- 22 Mar. 1995, Pineville, *Rapides* (K. Cummings)
- (♂) 25 Mar. 1944, "Nelson's Woods," LSU, Baton Rouge (R. E. Tucker; LSUMZ 9241)
- (♂) 25 Mar. 1964, Baton Rouge (S. A. Gauthreaux; TV-tower kill LSUMZ [skeleton] 48907)

early spring northern Louisiana:

- 30 Mar. 1996, Richard Fleming Park, Shreveport (R. Seidler; ABF)
- 30 Mar. 1996, South Lakeshore, Shreveport (R. Seidler; ABF)
- 3 Apr. 1993, Richard Fleming Park, Shreveport (R. Seidler; ABF)
- 4 Apr. 1981, near Many, Sabine (K. Cummings)
- 5 Apr. 1931, Monroe (Lowery 1931)

late spring:

- (18!) 31 May 1987, Cameron (D. L. Dittmann et al.; Imhof 1987)
- 1 June 1990, "East Jetty Woods," ca. 2 mi. S Cameron (A. W. Kratter, K. V. Rosenberg; ABF)

J. La. Ornith.

- (10) 1 June 1992, ca. 5 mi. E Cameron (S. W. Cardiff, D. L. Dittmann; Muth 1992b, ABF)
- (3) 2 June 1992, Garner Ridge, 3 mi. WSW Johnsons Bayou School (S. W. Cardiff, D. L. Dittmann; Muth 1992b, ABF)
- (2) 3 June 1992, "East Jetty Woods," ca. 2 mi. S Cameron (S. W. Cardiff, D. L. Dittmann; Muth 1992b, ABF)
- 4 June 1990, Garner Ridge, 3 mi. WSW Johnsons Bayou School (S. W. Cardiff; ABF)
- 4 June 1994, New Orleans (R. Seidler; ABF)
- (Q) 5 June 1988, 0.3 mi. S Hwy. 27 at Johnsons Bayou (J. V. Remsen; LSUMZ 136054)
- (♂) 5 June 1988, "East Jetty Woods," ca. 2 mi. S Cameron (S. W. Cardiff; LSUMZ 138331)
- (Q) 7 June 1987, Garner Ridge, 3 mi. W Johnsons Bayou School (S. W. Cardiff, D. L. Dittmann; Jackson 1987; LSUMZ 134848)

summer/breeding on coast:

- (pair, singing &, & with enlarged gonads), 25 May 1995, 1 mi. E old mouth Mermentau River, Cameron (SWC, DLD; Cardiff 1995c; LSUMZ uncatalogued)
- (pair fledged at least 1 young) June-July 1989, Grand Isle (D. P. Muth, G. B. Smalley, A. E. Smalley; Jackson 1989, ABF) early fall:
- (ad. σ) 10 July 1985, "East Jetty Woods," ca. 2 mi. S Cameron (S. W. Cardiff; LSUMZ 122477)
- 24 July 1994, New Orleans (D. P. Muth; Cardiff 1994, Purrington 1994) late fall northern Louisiana:
- (2) 30 Oct. 1993, Shreveport (R. Seidler, L. Cunningham; ABF) late fall central Louisiana:
- 29 Oct. 1989, 3.7 mi. N St. Gabriel (J. V. Remsen; Purrington 1990a)
- 29 Oct. 1992, 4 mi. N St. Gabriel (D. L. Dittmann; ABF)
- 31 Oct. 1995, Acadiana Park, Lafayette (P. Conover)

late fall southern Louisiana:

- 1 Nov. 1969, Bonnet Carré Spillway (R. J. Stein; Purrington 1970)
- 3 Nov. 1985, Bonnet Carré Spillway (R. J. Stein; ABF)
- (2) 3 Nov. 1985, New Orleans (G. B. Smalley, A. E. Smalley; ABF)
- (2) 5 Nov. 1989, *Cameron* (K. V. Rosenberg, T. S. Sillett, R. T. Brumfield; Purrington 1990a)
- 8 Nov. 1964, Johnsons Bayou (S. A. Gauthreaux, A. W. Palmisano; ABF)
- (im. \circlearrowleft) 11 Nov. 1984, Monkey Island, 1 mi. SW Cameron (D. L. Dittmann, S. W. Cardiff, J. V. Remsen [coll.]; LSUMZ 121888)

- (im. \circlearrowleft) 13 Nov. 1983, Hackberry Ridge, 2 mi. WSW Johnsons Bayou School (A. P. Capparella, J. V. Remsen [coll.], T. A. Parker; LSUMZ 113123)
- 13 Nov. 1988, Spanish Lake, *Iberia* (M. J. Musumeche; ABF) early winter records:
- 20 Dec. 1986 (J. Holmes, Jr., R. D. Purrington, C. Sloan; Sabine NWR CBC)

DIET: This species may be more frugivorous than other vireos in Louisiana. In spring, it is occasionally seen feeding on mulberry (Morus spp.) fruit. In fall, it feeds regularly on the fruit of Roughleaf Dogwood, Spicebush, and (B. Fontenot 1998) Prickly Ash ($Zanthoxylum\, clava-herculis$). Beyer (1900) stated that it "feeds principally on Magnolia seeds in the fall, upon which they became exceedingly fat and well flavored." LSUMZ stomach contents: arthropods only (N=50, including 6 with caterpillars, 1 with Orthoptera, 1 with Coleoptera); arthropods with fruit seeds or parts (N=4, 3 of which are in fall); and fruit seeds or parts (N=2, both fall, one identified as prickly ash.

TIMING OF MIGRATION: In spring, migration is extremely protracted, with the first few birds arriving typically in the third week of March and some migrants noted into the first week of June. Peaks can occur over a lengthy period, from roughly 20 April to at least 20 May (Remsen et al. 1996), and Redeyed Vireo can be the most common migrant passerine encountered from about 9 Apr. to 20 May. The mean duration of stopover times for 57 individuals studied in coastal Cameron Parish was 2.2 days, with four individuals remaining 7-9 days (Loria and Moore 1990). In fall, migrants have been found from 10 July to 14 November, with a slight peak from late August to the third week of September, both in coastal *Cameron* and inland near St. Gabriel (Remsen et al. 1996).

HIGH COUNTS:

<u>SPRING MIGRATION</u>: **100**+, 19 Apr. 1986, Cow Is., *Cameron* (P. McKenzie, R. Martin; Imhof 1986); **100**, 20 May 1993 (S. W. Cardiff, D. L. Dittmann); **50**, 11 Apr. 1978, Grand Isle (M. Myers, N. Nelkin, J. Reinoehl; ABF); **50**, 5 May 1978, New Orleans (J. Reinoehl; ABF).

BREEDING: 103, 23 May 1994, Atchafalaya River, St. Martin & Pointe Coupee (A. W. Kratter, J. V. Remsen); 69, 3 June 1989, Atchafalaya River BBS, St. Martin & Pointe Coupee (J. V. Remsen); 67, 1 June 1983, Tensas NWR, Madison (J. V. Remsen, R. B. Hamilton).

<u>FALL MIGRATION</u>: **100**+, 29 Aug. 1986, Grand Isle (A. E. Smalley, G. B. Smalley; Purrington 1987, ABF); **25**, 17 Sep.. 1983, *Cameron* (J. V. Remsen et al.); **24**, 29 Aug. 1986, *Cameron* (S. W. Cardiff, D. L. Dittmann, D. P. Muth); **18**, 4 Sep. 1983, *Cameron* (J. V. Remsen, C. L. Cummins, G. H. Rosenberg, B. Tedford).

BARE PARTS: (N = 39) <u>Iris</u>: (adults): red, dark red, dull red, rufous, or brownish-red (imms.): brown or reddish-brown. <u>Maxilla</u>: black, blackish, dark brown, brownish black, dark gray, brown, blackish gray. <u>Mandible</u>: variable, always paler than maxilla; typically gray or blue-gray, sometimes leaden blue, pale gray, grayish horn, silvery blue, ivory, or whitish; 9 described as evenly colored, the rest not, often with darker tips, and occasionally with lateral streaks or paler bases. <u>Tarsi and toes</u>: mainly blue-gray, gray, or leaden blue; some dark gray, pale gray, grayish-horn.

BODY MASS: Our data (Appendix 1) show that individuals may be able to increase their mass by nearly 100% by addition of subcutaneous fat. Dunning's (1993) mean mass of 16.7 g is high compared to our individuals with "no" or "light" fat, and is clearly biased by inclusion of fat individuals (range to 25.1 g).

SUBSPECIES: The subspecies of the northern Great Basin, *V. o. canoviridis* (A.O.U. 1957), is expected to occur as a migrant in Louisiana. Examination of our extensive series of specimens from Louisiana shows that there is some within-season variation in crown color (paler in *canoviridis*), but we are unable to ascertain whether this is due to individual variation or the presence of a few *canoviridis* in our sample. Certainly the vast majority of the migrants in Louisiana are the widespread nominate subspecies.

UNSUBSTANTIATED, DUBIOUS, OR ERRONEOUS RECORDS: 3 Jan. 1965 (Venice CBC, in Lowery 1974); 17 Dec. 1983 (Sabine NWR CBC; in Myers and Muth 1984).

Yellow-green Vireo Vireo flavoviridis

STATUS AND HABITAT: Three records from southwestern coastal Louisiana.

RECORDS:

- 3 June 1990, Willow Island, ca. 7 mi. E Cameron (D. L. Dittmann; Purrington 1990b)
- (♂) 2-3 May 1992, Smith Ridge, ca. 3 mi. NW Johnsons Bayou School, *Cameron* (D. P. Muth, M. Myers, P. Yaukey, S. W. Cardiff [coll.], et al.; Muth 1992a; LSUMZ 154286)
- (2 singing) 3-7 July 1998, Hackberry Ridge, 2 mi. WSW Johnsons Bayou School (J. D. Weckstein, J. Kleiman, B. Fontenot et al.)

TIMING OF MIGRATION: Interestingly, the only other specimen of Yellow-green Vireo for the central Gulf Coast was one from Pensacola on 4 May (1958; B. L. Monroe, Jr., F. Weston; Newman 1958b; LSUMZ 22492; Monroe 1959).

DIET: The Louisiana specimen had arthropods in its stomach.

BARE PARTS: The Louisiana specimen had a dull, dark red iris, a maxilla primarily dark gray-brown, a whitish-cream mandible with dark gray lateral streaks, and leaden blue tarsi and toes.

SUBSPECIES: The Louisiana specimen can be assigned to the nominate form (Remsen et al. 1996), which is widespread in Middle America.

Black-whiskered Vireo Vireo altiloquus

STATUS AND HABITAT: Casual migrant and summer visitor, perhaps occasionally breeding in scrubby thickets in Grand Isle and Delta NWR area; casual spring migrant in coastal chenier woods in *Cameron*. Two presumed breeding pairs were found at Delta NWR on 19 June and 4 July 1971 (Lowery 1974), and territorial singing males were found near New Orleans in summer 1997. Casual fall migrant at New Orleans.

Purrington (MS) noted that this species was not recorded in southeastern Louisiana before 1959. The first state record was not recorded until 1957. Thus it seems that the frequency of occurrence of this species has increased in the last 30 years. Although the Grand Isle area was undoubtedly the coastal locality most frequently visited by ornithologists in the first half of this century (e.g., see the number of references to Grand Isle in Oberholser [1938]), no Black-whiskered Vireos were recorded there until 1960. A historical increase in Louisiana would be consistent with the expansion of breeding range in Florida over the last century (Stevenson and Anderson 1994).

RECORDS:

Grand Isle area:

- (♂) 18 Mar. 1961 (S. A. Gauthreaux; Newman 1961b; LSUMZ 23781)
- 8 Apr. 1989 (M. Myers, C. Sorrells, A. E. Smalley, G. B. Smalley, J. Sevenair; Imhof 1989, Dittmann 1995)
- 1-7 May 1960, Grand Terre, *Jefferson* (D. G. Berrett, L. C. Binford, S. L. Warter; Newman 1960b, ABF)
- (3) 5 May 1963 (S. M. Russell, A. W. Palmisano; Imhof 1963⁻; LSUMZ 32228)
- 5 May 1992, Fourchon Road, *Lafourche* (N. Nelkin, R. D. Purrington; ABF)
- 7 May 1966, 7 mi. SW Grand Isle, *Lafourche* (J. J. Morony; LSUMZ [skeleton] 51379)
- 8 May 1991 (G. B. Smalley, A. E. Smalley, C. Sorrells; Cardiff and Dittmann 1991, Muth 1991, Dittmann and Kleiman 1998)
- 14 May 1990 (G. B. Smalley, A. E. Smalley; Jackson 1990, Dittmann 1995)
- 18 May 1988 (D. P. Muth, N. Nelkin; Imhof 1988, Dittmann and Kleiman 1998)

- 19-22 May 1985 (M. Myers, N. Nelkin, N. L. Newfield, D. P. Muth; Imhof 1985)
- 25 May 1992 (D. P. Muth, R. D. Purrington, N. Nelkin; Dittmann and Kleiman 1998; ABF)
- 1 June 1997, Fourchon Road (R. D. Purrington, D. P. Muth; Purrington 1997)
- 14 June 1992 (M. Myers, R. D. Purrington, G. Gomez; Purrington MS)
- (3) 22-23 June 1985 (R. D. Purrington, A. E. Smalley, G. B. Smalley, J. Sevenair; Purrington MS; presumably involving same bird as 19-22 May record above)
- (1-2, possibly carrying food) 8 July 12 Aug. 1990 (D. P. Muth, G. Craft, R. D. Purrington, N. Nelkin; Purrington 1990b)
- summer 1990 (T. A. Parker; different from above, Purrington MS)
- 16 July 1988 (D. P. Muth, G. B. Smalley; Purrington 1989)
- 14-26 July 1992 (M. Myers, N. Nelkin, R. D. Purrington, G. Gomez; ABF, Purrington MS)
- (2) 12 Aug. 1990 (D. P. Muth; Jackson 1991)
- 17 Aug. 1988 (D. P. Muth, A. E. Smalley, G. B. Smalley; Purrington MS) Cameron Parish:
- (Q) 16 Apr. 1993, 0.3 mi. S Hwy. 82 at Johnsons Bayou (mist-net casualty from "Use of Stopover Habitat by Neotropical Migrant Landbirds" project; Dittmann and Kleiman 1998; LSUMZ 159436)
- 17 Apr. 1967, "East Jetty Woods," ca. 2 mi. S Cameron (S. A. Gauthreaux, L. C. Binford, B. Buskirk, G. Strickland; Imhof 1967, ABF)
- (♂) 19 Apr. 1964, "East Jetty Woods," 2 mi. S Cameron (K. A. Arnold; Imhof 1964; LSUMZ 32430 [mount])
- (♂) 20 Apr. 1986, "East Jetty Woods," ca. 2 mi. S Cameron (P. Lehman, S. W. Cardiff [coll.] et al.; Imhof 1986 [including photo by Lehman], Dittmann 1990; LSUMZ 130583)
- 25 Apr. 2 May 1976, Johnsons Bayou (R. J. Stein, R. J. Newman et al.; Imhof 1976b⁻, ABF)
- (Q) 26 Apr. 1957, 3.5 mi. E Cameron (A. Wolfson; Newman 1957b; LSUMZ 22064)
- (♂) 26 Apr. 1964, 3 mi. ESE Johnsons Bayou (S. A. Gauthreaux; Imhof 1964; LSUMZ 32930)
- 26 Apr. 1970, Cameron (R. D. Purrington, K. Eyster [coll.] et al.; Imhof 1970; LSUMZ 155577)
- (♂) 26 Apr. 1986, Cow Is., 1 mi. W, 1/2 mi. N Rockefeller Refuge hdqtrs. (B. Daniels, S. W. Cardiff [coll.] et al.; Dittmann 1990; LSUMZ 130584)
- 27 Apr. 1963, "Peveto Beach Woods," *Cameron* (S. A. Gauthreaux; Imhof 1963, Dittmann 1990)

- 27 Apr. 1986, Garner Ridge, 3 mi. W Johnsons Bayou School (P. Lehman, D. P. Muth, S. W. Cardiff, D. L. Dittmann, C. A. Marantz, L. Bevier, B. Daniels, D. Willick; Dittmann 1990)
- 27 Apr. 1986, "East Jetty Woods," ca. 2 mi. S Cameron (M. Myers et al.; Dittmann 1995)
- 28 Apr. 1990, "East Jetty Woods," ca. 2 mi. S Cameron (T. A. Parker; Jackson 1990)
- (♂) 30 Apr. 1966, "Peveto Beach Woods" (S. A. Gauthreaux, A. W. Palmisano; Imhof 1966; LSUMZ 51251)
- 4 May 1990, Hackberry Ridge, 2 mi. WSW Johnsons Bayou School (T. A. Parker; Jackson 1990)
- 5 May 1993, "East Jetty Woods," ca. 2 mi. S Cameron (Gary Broussard; videotape examined by S. W. Cardiff, D. L. Dittmann, J. V. Remsen)
- 11 May 1963 (A. R. Tabor, E. Levi; Imhof 1963)
- (♂) 5 June 1988, Garner Ridge, 3 mi. W Johnsons Bayou School (J. V. Remsen: Jackson 1988, Dittmann 1995; LSUMZ 136055)
- (Q) 6 June 1988, ca. 5 mi. E Cameron (S. W. Cardiff, D. L. Dittmann; Jackson 1988, Dittmann 1990; LSUMZ 138332)
- 6 June 1992, "Peveto Beach Woods," *Cameron* (G. B. Smalley, A. E. Smalley, J. Sevenair, P. Wallace, C. Sorrells; Muth 1992b, ABF) other coastal:
- (apparently territorial) 19 June 1971, Delta NWR (J. S. Woodall, H. D. Pratt, J. H. Bartee et al.; Stewart 1971)
- (2) 4 July 1971, Rafael Pass, Delta NWR, different site from above (J. Farrand, R. J. Newman, C. Spear et al.; Stewart 1971, ABF) non-coastal:
- (2 singing males) 27 May 12 June 1997, Harahan, *Jefferson* (P. Yaukey et al; Cardiff 1997a, Purrington 1997)
- (singing male) 7-8 July 1997, Bonnet Carré Spillway (R. J. Stein, T. Sylvest, J. Sylvest; Purrington 1997)
- 29 Aug. 1959, City Park, New Orleans (S. A. Gauthreaux, M. E. Lewis; Newman 1959a, Lowery 1974).
- (♂) 17 Aug. 1963, Junction Paris Rd. and Morrison Rd, *Orleans* (A. W. Palmisano; Lowery 1974; LSUMZ 31221).

TIMING OF MIGRATION: Records of spring migrants in *Cameron* show a distinct peak in late April, whereas those from the Grand Isle area are spread more-or-less evenly through the spring and summer (Remsen et al. 1996). The only certain fall migrants (New Orleans) were recorded on 17 and 29 August.

BARE PARTS: (N = 4). <u>Iris</u>: dark red, red-brown. <u>Maxilla</u>: dark gray, dark grayish-horn-brown, dark horn brown. <u>Mandible</u>: dark gray with paler grayish-

flesh base; basal third dull horn blending to distal 2/3 dark gray; dark dull leaden blue; blue-gray with dull pinkish-ivory base. <u>Tarsi and toes</u>: blue-gray, bright gray, dull dark leaden blue, leaden blue.

BODY MASS: Even our small sample size (Appendix 1) suggests that some individuals may increase their mass by at least 75% by addition of subcutaneous fat.

SUBSPECIES: Remsen et al. (1996) found that 10 of the 12 study skins examined from Louisiana represent the subspecies expected to occur in Louisiana, *V. a. barbatulus*, which breeds in Florida, the Bahamas, and Cuba (Blake 1968). Two specimens, however, are *V. a. altiloquus*, the subspecies that breeds in the Greater Antilles; they represent only the second and third records of this subspecies from the United States. These two specimens are the ones collected in Cameron on 26 Apr. 1964 and 26 Apr. 1970 (see above).

Acknowledgments

Dan Purrington graciously allowed us access to his unpublished manuscript on the status of birds of southeastern Louisiana. Charles E. Lyon, Rosemary Seidler, and Paul Conover generously provided us with unpublished data from their field notes. Jaqueline Goerck copied critical portions of Ted Parker's unpublished field notes. For data on Louisiana specimens, we thank Sievert Rohwer and Chris Wood (Burke Museum, University of Washington), and M. Ralph Browning and Richard C. Banks (National Museum of Natural History, Smithsonian). The Louisiana Office of State Climatology, Louisiana State University, provided winter temperature data (through J. M. Grymes). Bill Fontenot, Mac Myers, and John Sevenair improved the manuscript.

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King Eider (Somateria spectabilis)

One sub-adult male (94-19) from 9 Apr.-18 May 1994, *Jefferson*: N side of Grand Terre Island, near the Louisiana Dept. of Wildlife and Fisheries Laboratory; **Robert P. Russell, Jr.**, Bill Klein (ph), R. D. Purrington (ph), Jim Holmes (drawing), Ron Stein, Joesph P. Kleiman, John P. Sevenair (ph), and Grace Lutschg (ph only) (*FN* 48(3):308; *LOS*159). This represents the first accepted record of any eider species for Louisiana.

White-winged Scoter (Melanitta fusca)

One male (92-35) from 2-3 May 1992, *Cameron*: 2 mi. W of (town of) Holly Beach; **David P. Muth**, Steven W. Cardiff, Donna L. Dittmann, Alfred E. and Gwen B. Smalley, Curtis C. Sorrells, Bill Wood, John P. Sevenair, and Curtis A. Marantz (*AB* 46(3):434).

Two in female-type plumage (95-87) on 5 Nov. 1995, *Orleans*: New Orleans, pond N of Recovery I landfill; Phillip A. Wallace (ph)(*LOS* 169).

Masked Duck (Nomonyx dominicus)

One in basic plumage (92-15) on 19 Jan. 1992, *Lafourche*: Nicholls State University Experimental Farm; Gary Worthington (*AB* 46(2):276; *LOS* 147). Although reported in *AB* as the sixth record for Louisiana, this is technically the first record reviewed and accepted by the LBRC; six records (including three specimens) reported in Lowery (1974) have never been officially reviewed.

Formerly in the genus Oxyura (AOU 1998).

Harris's Hawk (Parabuteo unicinctus)

One adult (94-40) from late Oct. 1994-19 Mar. 1995, Vermilion: Hwy. 35 about 1.5 mi. S of Hwy. 699; Paul and Darnelle McIntosh, Dave Patton (ph), Steven W. Cardiff (ph), Donna L. Dittmann, John P. Sevenair, Phillip A. Wallace (ph), and Paul E. Conover (ph only)(FN 49(2):156,FN 49(3):262; FN 49(4):661-662,866; LOS 162; LOS 164; LOS 166). Other sightings up to two miles away from the above locality during the same period are presumed to pertain to the same individual. This record coincides with a major invasion as far north as the Great Plains and Southern California during fall 1994 (FN 49(1):11; 49; 65; 69; 82; 100) and winter 1994-95 (FN49(2):119; 153; 155-159; 163; 166; 173; 178; 196-197; FN49(3):270; 288; 309). Because of these records it is more likely that this bird was part of that flight, rather than a falconer's escape. Two previous records were not accepted based on questionable origin (this report; Dittmann 1991). These records may pertain to wild birds. Lowery (1974) included the species on the State List; re-evaluation by the LBRC (Schulenberg 1988) resulted in the species being deleted. This record represents the first state record and restores the species to the State List.

Swainson's Hawk (Buteo swainsoni)

One adult light morph (93-02) on 17 Dec. 1992, *Jefferson Davis*: approx. 8 mi. SW of Crowley, Simmons Gully; Ronald J. Stein (*AB* 47(2):267). Swainson's Hawk was removed from the Review List 29 Apr. 1988 (Dittmann 1991); the record was reviewed because the observer submitted the record on a "long form," and because it was an "out of season" record.

White-tailed Hawk (Buteo albicaudatus)

One adult (95-157) from 15 Dec. 1995-15 Jan. 1996, *Jefferson Davis*: near parish landfill 3 mi. NW of Welsh; **Donna L. Dittmann**, Steven W. Cardiff (ph), John P. Sevenair, and Phillip A. Wallace (*FN* 50(2):180; *LOS* 171).

This represents the second accepted state record. After review of this species' status by the LBRC (LBRC Minutes, 26 Apr. 1985) it was retained on the State List based on the (now-lost) specimen collected 18 Nov. 1888 in *Calcasieu* (examined by H. C. Oberholser; Lowery 1974). The other record listed in Lowery (1974) has never been reviewed.

Ferruginous Hawk (Buteo regalis)

One immature (96-08) from 1-21 Jan. 1996, *Cameron*: 1 mi. W of (town of) Holly Beach; Roger J. Breedlove, Phillip A. Wallace (ph), Charles E. Lyon, Daniel F. Lane (ph and drawing)(*FN* 50(2):180; *LOS* 171). This represents only the second well-documented Louisiana record; none of the records mentioned in Lowery (1974) have been evaluated by the LBRC.

Rough-legged Hawk (Buteo lagopus)

One (91-13) on 16 Dec. 1990, *Cameron*: W. end of Sabine National Wildlife Refuge; Glenn Ousset and Gwen B. Smalley (*AB* 45(4):851).

Golden Eagle (Aquila chrysaetos)

One immature (89-94) on 30 Dec. 1987, *Tensas*: Tensas River NWR, large open field (managed for waterfowl) at S end of parish; Robert B. Hamilton (*AB* 42(4):549,947).

One immature (91-38) on 25 Oct. 1991, *Jefferson Davis*: Hwy. 99 about 5 mi. N of Hwy. 14 (just S of Bayou Chene); Gwen B. and Alfred E. Smalley, and Joseph Feldner (ph)(*AB* 46(1):104; *LOS* 147).

One immature (92-17) on 8 Feb. 1992, *Jefferson Davis*: Hwy. 99 just S of Hwy. 380; John P. Sevenair (drawing)(*AB* 46(2):276).

One immature (92-01) on 16 Feb. 1992, *Jefferson Davis*: intersection of Hwy. 99 and Hwy. 1126, a few miles S of Welsh; Phillip A. Wallace (ph), and

Curtis C. Sorrells (*AB* 46(2):276).

Records 92-17 and 92-01 were about six miles apart but may pertain to the same individual; these records were reported as a single record spanning 8-16 Feb. in *AB* 46(2):276.

Yellow Rail (Coturnicops noveboracensis)

One (93-05) on 17 Dec. 1992, *Acadia*: about 6.5 mi. SE of Crowley, near intersection of Hwys. 35 and 342 (due S of Rayne); Alfred E. and Gwen B. Smalley (*AB* 47(4):811,1005).

Four (92-54) on 29 Oct. 1992, *Vermilion*: N of Kaplan on Hwy. 13; Roger J. Breedlove. A general reference is *AB* 47(1):105.

Yellow Rail was removed from the Review List on 23 Apr. 1994.



Black-tailed Godwit (94-20) near junction of LA Hwys. 35 and 699 Vermilion Parish, Louisiana, 11-13 May 1994. Photograph by Paul E. Conover.

Black-tailed Godwit (Limosa limosa)

One in definitive alternate plumage (94-20) from 11-13 May 1994, *Vermilion*: E. side of Hwy. 35, approx. 1 mi. S of Hwy. 699; **Jim Holmes** (ph), Dave Patton (ph), Michael J. Austin, Joseph P. Kleiman, John P. Sevenair, Matthew Pontiff, and Paul E. Conover (ph)(*FN* 48(3):308; *LOS* 159). This is the first

record for Louisiana and the Gulf Coast.

Purple Sandpiper (Calidris maritima)

One in basic plumage (94-21) from 3-29 Apr. 1994, *Jefferson*: W. end of Grand Isle, jetty at Caminada Pass; Jim Holmes (ph), Joseph P. Kleiman, Dave Patton (ph), and **Charles E. Lyon** (drawing)(*FN* 48(3):308; *LOS* 159). This is the sixth state record.

Curlew Sandpiper (Calidris ferruginea)

One in nearly complete alternate plumage (91-26) from 13-14 May 1991, *Vermilion*: S of Vincent Refuge, S and W of intersection of Hwys. 699 and 35; Charles A. Butterworth, William R. Fontenot (ph), and Paul E. Conover (ph)(*AB* 45(3):457; *LOS*141).

One in alternate plumage (97-20) on 6 May 1997, *Vermilion*: Hwy. 699 near Hwy. 343; an individual nearby (Gladu Rd. and Hwy. 343) on 12 May 1997 was most likely the same bird based on plumage characteristics; Gary Broussard (ph)(*FN* 51(4):882).

These represent the third and fourth records accepted by the LBRC.

Ruff (*Philomachus pugnax*)

One female in basic plumage (93-06) on 17 Dec. 1992, *Acadia*: approx. 3 mi. S of Crowley, 1 mi. W of Hwy. 13; **Donna L. Dittmann** (drawing) and Steven W. Cardiff (*AB* 47(2):267).

One female in first basic plumage (94-60) on 21 Jan. 1994, *Vermilion*: approx. 1 mi. W of Gueydan near intersection of Parish Roads P-8-23 and P-8-6; Steven W. Cardiff (LSUMZ 159791) and **Donna L. Dittmann** (*)(FN48(2):216).

One male molting to alternate plumage (94-22) on 28 Mar. 1994, *Lafayette*: Congress St. extension, 2 mi. E of parish line (Hwy. 720); **Dave Patton** (ph), Paul E. Conover (ph) and Billy P. Leonard (FN 48(3):308; LOS 159).

Pomarine Jaeger (Stercorarius pomarinus)

One male, light morph, in second alternate plumage (90-105) on 28 May 1990, *Gulf of Mexico*: approx. 15-17 mi. S of mouth South Pass of the Mississippi River; Steven W. Cardiff (LSUMZ 152602) and Donna L. Dittmann (*)(*AB* 44(3):441).

One (91-20) on 7 Apr. 1991, *Cameron*: Hwy. 82 about 3 mi. W of Holly Beach; Michael J. Musumeche (*AB*45(3):457; *LOS*141).

One male in adult basic plumage (93-91) on 18 Dec. 1993, *Cameron*: 1/2 mi. SE of Holly Beach; Donna L. Dittmann (*) and Steven W. Cardiff (LSUMZ

159112)(FN 48(2):216).

One male in adult basic plumage (94-86) on 17 Dec. 1994, *Cameron*: 1/2 mi. SW of end of West Jetty of Calcasieu Pass; Donna L. Dittmann (*) and Steven W. Cardiff (LSUMZ 160600)(*FN* 49(2):157; *LOS* 164).

One female in adult basic plumage (94-87) on 17 Dec. 1994, *Cameron*: 2 mi. W of tip of West Jetty of Calcasieu Pass; Donna L. Dittmann (*) and Steven W. Cardiff (LSUMZ 160601)(*FN* 49(2):157; *LOS* 164).

One subadult light morph (96-50) on 30 Nov. 1996, *Cameron*: Rutherford Beach; Phillip A. Wallace (ph) and B. Mac Myers III (ph)(LOS 177). The date (20 Nov.) listed in FN 51(1):69 is incorrect.

Parasitic Jaeger (Stercorarius parasiticus)

One male in juvenal "intermediate morph" plumage (90-108) on 27 Sep. 1989, *Orleans*: New Orleans lakefront at Southern Yacht Club; original finder unknown, the bird was brought in weakened condition to the Audubon Park Zoo Wild Bird Rehabilitation Center (#89-1542), but died same day; David Muth (LSUMZ 139847) and Donna L. Dittmann (*).

One female in juvenal plumage (95-124) on 27 Oct. 1995, *Cameron*: 9 mi. W of old mouth Mermentau River (Rutherford Beach); Steven W. Cardiff (LSUMZ 162175) and Donna L. Dittmann (*)(*FN*50(1):67; *LOS*169).

Long-tailed Jaeger (Stercorarius longicaudus)

One female in second alternate "intermediate morph" plumage (90-106) on 28 May 1990, *Gulf of Mexico*: approx. 15-17 mi. S mouth of South Pass of the Mississippi River; Steven W. Cardiff (LSUMZ 139592) and Donna L. Dittmann (*)(*AB*44(3):441). This is the second Louisiana record.

Little Gull (Larus minutus)

One molting from first basic to first alternate plumage (94-24) from 26-27 Apr. 1994, *Cameron*: W of (town of) Holly Beach; **Jim Holmes** (ph), Marcus Roening, John A. Gerwin, Paul E. Conover (ph only)(*FN*48(3):308; *LOS*159).

One in definitive alternate plumage (96-75) on 6 Apr. 1996, *Cameron*: W of (town of) Holly Beach; Joseph P. Kleiman (ph).

California Gull (Larus californicus)

One male in definitive basic plumage (89-167) on 28 Oct. 1989, *Cameron*: 3 mi. W of old mouth Mermentau River (Rutherford Beach); Steven W. Cardiff (LSUMZ 152027; ph) and Donna L. Dittmann (*)(*AB*44(1):106).

One female in second alternate plumage (94-65) on 14 May 1994, *Cameron*: 5 mi. W of old mouth Mermentau River (Rutherford Beach); Steven W. Cardiff

(LSUMZ 160625) and Donna L. Dittmann (*) (FN48(3):309; LOS159). This represents the first spring record (between late February and late June).

One male in definitive basic plumage (95-128) on 27 Oct. 1995, *Cameron*: 8 mi. W of old mouth Mermentau River (Rutherford Beach); Steven W. Cardiff (LSUMZ 162190) and Donna L. Dittmann (*)(FN50(1):67; LOS169).

One male in fourth basic plumage (96-48) from 30 Nov.-4 Dec. 1996, *Cameron*: 5 mi. W of old mouth Mermentau River (Rutherford Beach); **Phillip A. Wallace** (ph), **B. Mac Myers III** (ph), Steven W. Cardiff (LSUMZ 162250), and Donna L. Dittmann (*)(*FN*51(1):70; *LOS*177).

Lesser Black-backed Gull (*Larus fuscus*)

One molting to fourth basic plumage (90-110) on 1 Sep. 1990, *Lafourche*: beach at end of Hwy. 3090 (Fourchon Beach); Phillip A. Wallace (ph) and John P. Sevenair (*AB*45(1):116).

One in definitive basic plumage (91-17) on 22 Feb. 1991, *St. Bernard*: Chalmette, "BFI" Crescent Acres Landfill; Curtis A. Marantz and Paul Lehman (*AB* 45(2):285; *LOS*147).

One in second basic plumage (91-22) on 26 May 1991, *Jefferson*: Grand Isle; Phillip A. Wallace (ph), Curtis C. Sorrells (*AB*45(3):457; *LOS*141).

One in first basic plumage (91-33) on 16 Nov. 1991, *Orleans*: New Orleans, Lake Pontchartrain at Seabrook Boat Launch; David P. Muth (ph)(AB46(1):105).

Four, two in first basic, one in second basic, and one in definitive basic plumage (91-51) on 21 Dec. 1991, *St. Bernard*: Chalmette, "BFI" Cresent Acres Landfill; Steven W. Cardiff (ph), Donna L. Dittmann, and Curtis A. Marantz (ph). A photo of one of the first-basic individuals appears in *AB*46(2):277-278.

One in definitive alternate plumage (92-33) on 15 Apr. 1992, *Cameron*: 1 mi. W of (town of) Holly Beach; Roger J. Breedlove and Al Schellenberg (ph only).

One adult (93-43) presumably the same bird on 17 July, 1 Aug., and 5 Sep. 1993, *Cameron*: Broussard Beach near Cameron; Joseph P. Kleiman and Gayle Strickland (ph)(AB48(1):119).

One female molting from first basic to first alternate plumage (94-88) on 6 Apr. 1994, *Cameron*: 5 mi. W of old mouth Mermentau River (Rutherford Beach); Donna L. Dittmann (*) and Steven W. Cardiff (LSUMZ 160612).

One female molting from first basic to first alternate plumage (94-89) on 16 Apr. 1994, *Cameron*: 6 mi. W of old mouth Mermentau River (Rutherford Beach); Donna L. Dittmann (*) and Steven W. Cardiff (LSUMZ 160613).

One male in third alternate plumage (94-90) on 17 Apr. 1994, *Cameron*: 7 mi. W of old mouth Mermentau River (Rutherford Beach); Donna L. Dittmann (*) and Steven W. Cardiff (LSUMZ 160614).

At least seven individuals (94-26) from 23-27 Apr. 1994, Cameron: along

Hwy. 82 W of (town of) Holly Beach (two second-year, and three third-year-orolder individuals present on 23 Apr., two of same five seen 24 Apr., and two first-year individuals on 27 Apr.); Paul E. Conover (ph).

One in first alternate plumage (94-29) on 27 Apr. 1994, *Cameron*: Holly Beach; Jim Holmes (ph). Possibly one of the first-year birds included in previous record.

One female in third alternate plumage (94-91) on 27 Apr. 1994, *Cameron*: 5 mi. W of old mouth Mermentau River (Rutherford Beach); Donna L. Dittmann (*) and Steven W. Cardiff (LSUMZ 160615).

One female molting from second basic to third alternate plumage (94-92) on 28 Apr. 1994, *Cameron*: 4 mi. W of old mouth Mermentau River (Rutherford Beach); Donna L. Dittmann (*) and Steven W. Cardiff (LSUMZ 160616).

One male in first basic plumage (94-93) on 28 Apr. 1994, *Cameron*: 5 mi. W of old mouth Mermentau River (Rutherford Beach); Donna L. Dittmann (*) and Steven W. Cardiff (LSUMZ 160617).

One female molting from second basic to second alternate plumage (94-94) on 28 Apr. 1994, *Cameron*: 2 mi. W of old mouth Mermentau River (Rutherford Beach); Donna L. Dittmann (*) and Steven W. Cardiff (LSUMZ 160618).

One female in first alternate plumage (94-95) on 14 May 1994, *Cameron*: 5 mi. W of old mouth Mermentau River (Rutherford Beach); Donna L. Dittmann (*) and Steven W. Cardiff (LSUMZ 160619). A general reference for the spring 1994 observations appears in *FN*48(3):309 and *LOS*159.

One female molting from first alternate to second basic plumage (94-96) on 18 June 1994, *Cameron*: 5 mi. W of old mouth Mermentau River (Rutherford Beach); Donna L. Dittmann (*) and Steven W. Cardiff (LSUMZ 160620).

One male molting from first alternate to second basic plumage (94-97) on 18 June 1994, *Cameron*: 5 mi. W of old mouth Mermentau River (Rutherford Beach); Donna L. Dittmann (*) and Steven W. Cardiff (LSUMZ 160621).

One female molting from first alternate to second basic plumage (94-98) on 19 June 1994, *Cameron*: 5 mi. W of old mouth Mermentau River (Rutherford Beach); Donna L. Dittmann (*) and Steven W. Cardiff (LSUMZ 160622).

One female molting from first alternate to second basic plumage (94-99) on 19 June 1994, *Cameron*: 5 mi. W of old mouth Mermentau River (Rutherford Beach); Donna L. Dittmann (*) and Steven W. Cardiff (LSUMZ 160623). This record and the three preceding records are reported in *FN*48(5):952 and *LOS*161.

One female in definitive basic plumage (94-100) on 3 Nov. 1994, *Cameron*: 9 mi. W of old mouth Mermentau River (Broussard Beach); Donna L. Dittmann (*) and J. V. Remsen (LSUMZ 160624)(*FN*49(1):58; *LOS*162).

One male molting from third basic to fourth alternate plumage (95-125) on

28 Apr. 1995, *Cameron*: 5 mi. W of old mouth Mermentau River (Rutherford Beach); Steven W. Cardiff (LSUMZ 162184) and Donna L. Dittmann (*). This and the preceding record are reported in *FN*49(3):262 and *LOS*165.

One male in worn definitive alternate plumage (95-126) on 23 Sep. 1995, *Cameron*: 5 mi. W of old mouth Mermentau River (Rutherford Beach); Steven W. Cardiff (LSUMZ 162185) and Donna L. Dittmann (*).

One male in definitive alternate plumage (95-127) on 24 Sep. 1995, *Cameron*: 5 mi. W of old mouth Mermentau River (Rutherford Beach); Steven W. Cardiff (LSUMZ 162187) and Donna L. Dittmann (*).

One female molting from second alternate to third basic plumage (95-129) on 24 Sep. 1995, *Cameron*: 5 mi. W of old mouth Mermentau River (Rutherford Beach); Steven W. Cardiff (LSUMZ 162186) and Donna L. Dittmann (*).

One male in second basic plumage (95-164) on 27 Oct. 1995, *Cameron*: 1 mi. W of old mouth Mermentau River (Rutherford Beach); Steven W. Cardiff (LSUMZ 162188) and Donna L. Dittmann (*).

One female in definitive basic plumage (95-165) on 27 Oct. 1995, *Cameron*: 4 mi. W of old mouth Mermentau River (Rutherford Beach); Steven W. Cardiff (LSUMZ 162189) and Donna L. Dittmann (*). This and the preceding four records are referred to in *FN*50(1):67 and *LOS*169.

One in definitive basic plumage (95-159) on 2 Dec. 1995, *Cameron*: Holly Beach, Phillip A. Wallace (ph) (FN50(2):180; LOS171).

One in definitive alternate plumage (96-23) on 5 Apr. 1996, *Lafourche*: Fourchon Beach; Phillip A. Wallace (ph).

One male in first basic plumage (96-71) on 28 Apr. 1996, *Cameron*: 3 mi. W of old mouth Mermentau River (Rutherford Beach); Steven W. Cardiff (LSUMZ 162251) and Donna L. Dittmann (*).

One in definitive alternate plumage (96-24) on 27 Apr. 1996, *Cameron*: Rutherford Beach; Phillip A. Wallace (ph) and B. Mac Myers III (ph). This and the two preceding records are referred to in *FN*50(3):292 and *LOS*174.

Lesser Black-backed Gull was removed from the Review List on 7 Sep. 1996.

Glaucous Gull (Larus hyperboreus)

One in first basic plumage (89-166) on 30 Dec. 1989, *St. Bernard*: Chalmette, "BFI" Crescent Acres Landfill; Steven W. Cardiff (ph) and Donna L. Dittmann (*AB*46(2):277; *LOS*147).

One in first basic plumage (91-45) on 8 Dec. 1991, *Orleans*: New Orleans, junction of inner harbor and Lake Pontchartrain at Seabrook Bridge; Alfred E. and Gwen B. Smalley (ph), and David P. Muth (ph) (*AB*46(2):277).

One in definitive basic plumage (91-50) on 21 Dec. 1991, St. Bernard:

Chalmette, "BFI" Crescent Acres Landfill; Steven W. Cardiff (ph), Donna L. Dittmann, and Curtis A. Marantz (ph)(*AB*46(2):277; *LOS*147). This is the first accepted record of an adult in Louisiana.

One in first alternate plumage (93-31) from 24-25 Apr. 1993, *Cameron*: Broussard Beach near Cameron; Curtis A. Marantz, John P. Sevenair, Cecil C. Kersting (ph), Phillip A. Wallace, Joseph P. Kleiman, and Gayle Strickland (ph)(*AB*47(3):422).

One female in first alternate plumage (94-32) from 23-28 Apr. 1994, *Cameron*: 6 mi. W of old mouth Mermentau River (Rutherford Beach); **John P. Sevenair**, Joseph P. Kleiman, Jim Holmes (ph only), Steven W. Cardiff (LSUMZ 160626) and Donna L. Dittmann (*).

One female in first alternate plumage (94-33) from 23-27 Apr. 1994, *Cameron*: 1 mi. E of (town of) Holly Beach; **Paul E. Conover** (ph), Steven W. Cardiff (LSUMZ 160628) and Donna L. Dittmann (*).

One female in second alternate plumage (94-61) on 15 May 1994, *Cameron*: 5 mi. W of old mouth Mermentau River (Rutherford Beach); Steven W. Cardiff (LSUMZ 160627) and Donna L. Dittmann (*). This and the two preceding records appear in *FN*48(3):309 and *LOS*159.

One in first basic plumage (97-06) on 10 Feb. 1997, and likely the same individual 27 Apr. 1997, *Cameron*: 2 mi. W of (town of) Holly Beach; B. Mac Myers III (ph), Phillip A. Wallace (ph), Laurence C. Binford, and Joseph P. Kleiman (*FN*51(4):882).

One in first alternate plumage (97-21) from 23 Apr.-3 May 1997, *Cameron*: Rutherford Beach, 1-5 mi. W of old mouth Mermentau River (Rutherford Beach); Daniel F. Lane (ph) and Brian Gibbons (ph only)(*FN*51(4):882 includes ph by Lane).

Great Black-backed Gull (Larus marinus)

One in definitive basic plumage (89-131) on 9 and 29 Oct. 1988, *Lafourche*: Fourchon Beach and Elmer's Island; David P. Muth, R. D. Purrington, Gwen B. Smalley (ph)(*AB*43(1):118). A report from the same locality on 8 Oct. was initially believed to be the same bird. Upon closer inspection of the reports, the age of the bird did not agree between the sighting on 8 Oct., and those of 9 and 29 Oct. The 8 Oct. record will be reviewed separately.

One female in first alternate plumage (96-72) on 5 May 1996, *Cameron*: 9 mi. W of old mouth Mermentau River (Broussard Beach); Steven W. Cardiff (LSUMZ 162247) and Donna L. Dittmann (*)(FN50(3):292; LOS174).

One probable fourth year (97-17) on 9 Mar. 1997, *Lafourche*: between Fourchon Lake and Gulf of Mexico, end of 17th Street; Phillip A. Wallace (ph) and B. Mac Myers III (ph)(*FN*51(4):882).

Sabine's Gull (Xema sabini)

One in first alternate plumage (92-32) on 2 May 1992, *Cameron*: East Jetty at mouth of Calcasieu Pass; Curtis A. Marantz (ph), Curtis C. Sorrells, and Phillip A. Wallace (*AB*46(3):436).

This is the second accepted record for Louisiana.

Black-legged Kittiwake (Rissa tridactyla)

One in first basic plumage (90-84) on 11 Nov. 1990, *Cameron*: East Jetty at the mouth of Calcasieu Pass; Erika Wilson, Bettie Harriman, and **Bruce Hallett** (*AB*45(1):116).

One molting to first alternate plumage (91-18) on 27 Apr. 1991, *Cameron:* East Jetty Road across from the Cameron sewage ponds; Curtis C. Sorrells, Cecil C. Kersting (ph), and Phillip A. Wallace (ph)(*AB*45(3):457 includes ph by Kersting; *LOS*141).

One in first basic plumage (91-47) on 14 Dec. 1991, *Cameron*: Calcasieu River ship channel, off S edge Monkey Island; Peter H. Yaukey, David P. Muth, Alfred E. and Gwen B. Smalley (ph)(*AB*46(2):277; *LOS*147).

One in first basic plumage (94-34) from 6 Apr. and 26 Apr.-3 May 1994, *Cameron*: approx. 1 mi. W of (town of) Holly Beach; **Paul E. Conover** (ph) and Dave Patton (ph)(*FN*48(3):309; *LOS*159). Although treated as a single record involving one bird, the 6 Apr. bird could conceivably have been a different individual.

One female in first basic plumage (96-67) on 23 Dec. 1996, *Cameron*: 2 mi. W of old mouth Mermentau River (Rutherford Beach); William R. Fontenot (LSUMZ 162252), Roger J. Breedlove, Matthew Pontiff (ph only), and Donna L. Dittmann (*)(*FN*51(2):472).

One in first alternate plumage (97-16) on 10 May 1997, *Cameron*: 2 mi. W of Holly Beach; Joseph P. Kleiman (ph) and Karen Fay (*FN*51(4):882 includes ph by Kleiman).

Arctic Tern (Sterna paradisaea)

One in definitive alternate plumage (95-61) on 30 May 1995, *Cameron*: 1.5-2 mi. W of (town of) Holly Beach; Paul E. Conover (ph) and Gary Broussard (ph only)(*FN*49(3):262).

This is the sixth record for Louisiana.

Bridled Tern (Sterna anaethetus)

Twenty-five, most in first alternate plumage, some in second alternate (90-107) on 28 May 1990, *Gulf of Mexico*: approx. 15 mi. S mouth of South Pass of Mississippi River; Steven W. Cardiff (LSUMZ 139593, 139594, 152603)

and Donna L. Dittmann (*)(AB44(3):442).

Two (92-42) on 27 Aug. 1992, *Pointe Coupee*: False River; Curtis A. Marantz (ph) and Andrew W. Kratter (Marantz and Kratter 1998; *AB*47(1):104). This observation was associated with the passage of Hurricane Andrew.

One adult (92-57) on 28 Aug. 1992, near boundary of *Jefferson* and *St. Charles*: Lake Salvador; David P. Muth (Muth 1998; *AB*47(1):104). This observation was associated with the passage of Hurricane Andrew.

Fifty-nine, most in non-breeding plumage (95-71) on 27 May 1995, *Gulf of Mexico*: approx. 40 mi. SSE mouth of South Pass of the Mississippi River, Dwight E. Peake (ph), Roger J. Breedlove, and Joseph P. Kleiman (*FN*49(3):262). Bridled Tern was removed from the Review List on 7 Sep. 1996.

Eurasian Collared-Dove (Streptopelia decaocto)

One (91-36) from 5-9 Sep. 1991, St. John the Baptist: Reserve; Ronald J. Stein (LOS145).

Two (93-25) on 3 Jan. 1993 (and reported as present for months), *St. John the Baptist*: Laplace, 1409 Glendale Street; Gene Street (ph only) and Ronald J. Stein. A general reference is *AB*47(2):267.

Seven (93-38) on 2 Apr. 1993, *Orleans*: New Orleans, batture between Audubon Park Zoo and the Mississippi River; Alfred E. Smalley (ph). General reference is *AB*47(3):422.

Two (94-54) on 1 Jan. 1994, St. John the Baptist: Laplace, 1409 Glendale Street; Gene Street (ph only) and Ron Stein (card)(FN49(2):157).

Eurasian Collared-Dove was added to the State List as an Introduced Species. Breeding has been observed at several localities scattered throughout the state. The species was removed from the Review List 7 Sep. 1996.

Broad-billed Hummingbird (Cynanthus latirostris)

One adult male (90-79) from 2 Nov. 1990-5 Jan. 1991, *Jefferson*: Metairie, 3016 45th Street, (Casa Colibri); **Nancy L. Newfield** (banded 8 Dec.-#X36942; a rectrix and several throat feathers deposited at LSUMNS), Paul Newfield III (ph only), David P. Muth (ph), Cecil C. Kersting, John P. Sevenair, Alfred E. and Gwen B. Smalley (ph)(*AB*45(1):116; (2):285).

One adult male (92-68) from 30 Nov. 1992-4 Mar. 1993, *St. Mary*: Amelia; 3316 Lake Palourde Road; **Sweetie and Donald Mire** (ph), Roger J. Breedlove, Jonathan L. Dunn, Alfred E. and Gwen B. Smalley, Curtis A. Marantz (ph), Charles A. Butterworth (card), and Nancy L. Newfield (banded 1 Dec.-#T01468; card) (*AB*47(1):106, *AB*47(2):268).

One male in first basic plumage (93-15) from last week of December 1992-18 Jan. 1993, *Jefferson*: Metairie, River Ridge, 233 Thoreau Street (residence

of and found by Jan and Cornell Tramontana); Alfred E. Smalley (ph), Curtis A. Marantz (ph), and Nancy L. Newfield (banded 3 Jan.-#T01495; card). Vaguely referred to in AB47(2):268.

One adult male (97-03) on 4-11 Jan. 1997, East Baton Rouge: Baton Rouge, 12634 Goodwood Blvd. (residence of Roy and Betty Walker); Dave Patton, Laurence C. Binford, Miriam Davey, and Joseph P. Kleiman (ph)(FN51(3):759).

These represent the first records from Louisiana, a fifth record is pending.

Blue-throated Hummingbird (Lampornis clemenciae)

One female (92-64) from 23-24 Nov. 1992, *East Baton Rouge*: Baton Rouge, 2832 Zeeland Ave.; **Mark Swan**, Donna L. Dittmann, Gwen B. and Alfred E. Smalley, Andrew W. Kratter (ph), John P. Sevenair, and Miriam Davey (*AB*47(1):106; *LOS*151). This represents the first record for Louisiana.

One female (95-72) from 7 Mar.-25 Apr. 1995, *St. Tammany*: Slidell, corner of 10th and Teddy streets (residence of and found by Peggy Siegert); Nancy L. Newfield (banded 11 Mar.-#T79992), John P. Sevenair, Phillip A. Wallace (ph), Steven W. Cardiff (ph only), Margie Griffith (ph only), and Joseph P. Kleiman (*LOS*165). Although reported in *FN*49(3):263 as the "3rd record" for Louisiana, it is the second accepted record for the state.

Anna's Hummingbird (Calypte anna)

One male (92-53) from 20 Nov.-4 Dec. 1992, *St. James*: Gramercy; **Thomas A. and Eloise Sylvest** (ph), Nancy L. Newfield (banded 21 Nov.-#X40196), and Roger J. Breedlove (*AB*47(1):106).

One male (93-19) from 3-5 Jan. 1993, *Lafayette*: Lafayette, 103 Tackaberry (Ducrest Residence; homeowners report bird present 10-14 days prior to above observation); William R. Fontenot and Gary Broussard (ph only). Vaguely referred to in AB47(2):268.

One immature female (95-167) from 19 Nov.-27 Dec. 1995, *Cameron*: Cameron (residence of and found by Marianna Tanner); Dave Patton (ph and banded on 19 Nov.-#Y01602)(*LOS*171). Reported in*AB*50(2):180 as "one of five banded in Louisiana" during the winter season.

One female (96-58) on 2 Nov. 1996, *Beauregard*: near DeRidder, 742 Bill Churchman Loop; Matt Pontiff (ph)(*FN*51(1):70; *LOS*177).

One immature male (96-76) on 23 Feb. 1996, *Lafayette*: Lafayette (residence of Mrs. Houeye); Dave Patton (ph and banded-#Y01608). Vague reference in *FN*50(2):181.

One female (96-61) from 14-22 Dec. 1996, *East Baton Rouge*: Baton Rouge, 112 Fulwar Skipwith Rd. (residence of Micheline Schutte), Margie Griffith (ph), Miriam Davey, Joseph P. Kleiman, and Laurence C. Binford. Reported in

FN51(3):759 on 15 Dec. only; the correct date span is listed above.

Calliope Hummingbird (Stellula calliope)

One immature male (92-03) from 19 Dec.-15 Mar. 1992, *East Baton Rouge*: Baton Rouge, 12244 Pecan Grove Ct. (residence of Charlie and Pat Weigel); Miriam Davey, Nancy L. Newfield (banded 2 Mar.#T01395), Andrew W. Kratter, Curtis A. Marantz, and Roger J. Breedlove (*AB*46(2):227; *AB*46(4):840,1034; *LOS*147). Reported in *AB*46(3):436 as "present since 18 Dec. 1991;" there is no supporting documentation in the LBRC files for prior to the date span listed above.

One immature male (92-72) from 22-23 Dec. 1992, *Iberville*: 3.7 mi. N St. Gabriel, 545 Pecan Drive; J. V. Remsen (LSUMZ 154465) and Steven W. Cardiff (*)(*AB*47(2):268).

One immature male (94-66) on 12 Nov. 1994, *Iberville*: 4 mi. N of St. Gabriel, 435 Pecan Drive; Steven W. Cardiff (LSUMZ 159796) and Donna L. Dittmann (*FN*49(1):59).

One immature male (95-07) from 21 Dec. 1994-15 Jan. 1995, *Lafayette*: Lafayette, 919 W. Pinhook; Paul E. Conover (ph)(*FN*50(2):181).

One female or immature plumaged bird (95-94) from 24 Nov.-(at least) 26 Dec. 1995, *St. Tammany*: Abita Springs, 22315 Main Street (residence of and found by Olga Clifton); Christopher G. Brantley and Matt Pontiff (ph)(*FN*50(1):68, *FN*50(2):181; *LOS*169.)

One female (95-123) on 6 Dec. 1995, *Iberville*: 4 mi. N of St. Gabriel, 435 Pecan Drive; Steven W. Cardiff (LSUMZ 161254) and Donna L. Dittmann (*)(FN50(2):181; LOS171).

One immature male (95-122) on 9 Dec. 1995, *Iberville*: 3.7 mi. N of St. Gabriel, 545 Pecan Drive; J. V. Remsen (LSUMZ 161255) and Donna L. Dittmann (*)(FN50(2):181; LOS171).

One immature male (95-166) on 12 Dec. 1995, *St. Tammany*: Abita Springs, 22315 Main Street; **Olga Clifton** (LSUMZ 161253) and Steven W. Cardiff (*)(*FN*50(2):181).

One immature male (95-138) from 28 Dec. 1995-4 Jan. 1996, *Lafayette*: 316 Myrtle Place Blvd.; Dave Patton (ph and banded on 4 Jan.-#Y01542)(*LOS*171).

One immature male (96-73) on 3 Feb. 1996, *Iberville*: 3.7 mi. N of St. Gabriel, 545 Pecan Drive; J. V. Remsen (LSUMZ 162307) and Donna L. Dittmann (*)(FN50(2):181). This and the preceding five records were part of an unprecedented invasion into the region during late fall 1995 and winter 1995-96 (FN50(1):68; FN50(2):181; LOS169; LOS170). Another dozen or so records from that influx are pending or have not been submitted.

Broad-tailed Hummingbird (Selasphorus platycercus)

One immature male (93-08) from 19 Jan.-4 Feb. 1993, *Lafayette*: Lafayette, Acadiana Park Nature Station; William R. Fontenot, Paul E. Conover (ph), and Gary Broussard (ph only). Vaguely referred to in *AB*47(2):268.

One immature male (95-171) from 15 Nov.-2 Dec. 1995, *Lafayette*: Lafayette, 122 Memory Lane, Dave Patton (ph and banded on 22 Nov.-#Y01603).

One immature male (95-140) from 3 Nov. 1995-28 Feb. 1996, *East Baton Rouge*: Baton Rouge, 9150 Ventura Drive; **Michael A. Seymour** (ph), Miriam Davey, and Laurence C. Binford (*LOS*171).

One immature male (96-04) from mid January-end of February 1996, *East Baton Rouge*: Baton Rouge, 545 Magnolia Wood Ave.; Dennis Demcheck (ph)(*LOS*171).

One adult male (96-11) from 5 Jan.-Apr. 1996, *Lafayette*: Lafayette, Homas Street (Andriano Residence); Paul E. Conover (ph)(*LOS*171 indicated that bird "arrived about 25 Dec."). This and the preceding three records were vaguely mentioned in *FN*50(2):181.

One adult male (96-60) from 1 Oct. 1996-mid Mar. 1997, *East Baton Rouge*: Baton Rouge, 5940 Seven Oaks St.; **Margie Griffith** (ph), Michael A. Seymour (ph), and Miriam Davey (*LOS*177, *FN*51(4):882).

One immature male (96-78) from 25 Nov. 1996-2 Apr. 1997, *Lafayette*: Lafayette, Belle River Townhomes; Dave Patton (ph and banded on 10 Dec.-#Y01609).

Allen's Hummingbird (Selasphorus sasin)

One male completing its first prealternate molt (86-53) from 1-9 Mar. 1986, East Baton Rouge: Baton Rouge, 15533 Geraldine Drive; Paul M. McKenzie and Chuck Feerick (AB40(2):291). This record was submitted as an immature present from 7 Dec. 1985 and molting to adult male plumage by 9 Mar. 1986. The immature was initially identified as a Rufous Hummingbird (S. rufus) by Nancy Newfield (banded-#X36757) on 8 Dec., at which time in-hand measurements corresponded to that species. On 2 Mar., McKenzie reported a bird performing a display "typical of Allen's Hummingbird." On 8 Mar., the bird had completed its prealternate molt and possessed a full gorget and entirely green back. Because the hummingbird was never recaptured to confirm band presence or number (McKenzie reported that the displaying bird possessed a band) or take further measurements, the Committee took a conservative view and only accepted the record for the date span during which the bird was observed performing the classic J-shaped "Allen's" display flight.

One immature male (90-30) from 27 Nov.-29 Dec. 1989, *East Baton Rouge*: Baton Rouge, 5165 Melrose Blvd. (home of Bill and Betty Walker); **Paul M.**

McKenzie (rectrices 1, 2, 5 deposited at LSUMNS)(AB44(1):107).

One immature male (90-21) from 6 Feb.-26 Mar. 1988, *St. Charles*: Norco (residence of Mahlon Ayme); Nancy L. Newfield (rectrices deposited at LSUMNS; banded-#X36919)(*AB*42(3):448; *AB*42(2):278). The published date of 8 Feb. is incorrect.

One immature male (91-09) from 11-12 Dec. 1990 and 24 Dec. 1990-24 Feb. 1991, *Jefferson*: Metairie, 3016 45th Street (Casa Colibri); Nancy L. Newfield (rectrices deposited at LSUMNS; banded-#X36944). The bird arrived in immature plumage and molted to full alternate plumage before departure. A general reference is AB45(2):285.

Red-naped Sapsucker (Sphyrapicus nuchalis)

One immature male (89-157) from 27-31 Oct. 1989, *Jefferson*: Grand Isle, between Post and Nacarri lanes; **Curtis C. Sorrells**, Gwen B. (ph) and Alfred E. Smalley, John P. Sevenair, David P. Muth, and R. D. Purrington (*AB*44(1):107). This represents the first record for Louisiana.

Pacific-slope Flycatcher (*Empidonax difficilis*)

One immature female (95-03) on 28 Apr. 1991, *Cameron*: Smith Ridge, approx. 3 mi. NW of Johnsons Bayou School; Mario Cohn-Haft (ph only), Kenneth V. Rosenberg (ph; LSUMZ 152085), David P. Muth (card), and found by Theodore A. Parker III (*AB* 45(3):458; *LOS*141).

One immature male (94-57) from 21-23 Dec. 1994, *Acadia*: just S of Hwy. 342 on Hwy. 35; **Michael J. Musumeche** (card), **Dave Patton** (ph), and Steven W. Cardiff (LSUMZ 159809)(*FN*49(2):158; *LOS*164; *LOS*166).

One immature male (96-74) from 29 Dec. 1995-4 Jan. 1996, *Lafayette*: Lafayette, Moore Park; **Billy Leonard, Steve Shively**, and Steven W. Cardiff (LSUMZ 162330), (*FN*50(2):181; *LOS*171).

These represent the first records for Louisiana.

${\bf Cordiller an\ Flycatcher}\ ({\it Empidonax\ occidentalis})$

One adult male (94-63) on 26 Jan. 1994, *Plaquemines*: 1/4 mi. SE of Fort Jackson; Steven W. Cardiff (LSUMZ 159810) and **Donna L. Dittmann** (*FN*48(2):217).

One immature male (95-79) from 28-29 Oct. 1995, *Cameron*: Garner Ridge, 3 mi. W of Johnsons Bayou School; **Peter H. Yaukey**, Phillip A. Wallace (ph), and Steven W. Cardiff (LSUMZ 162199)(FN50(1):68; LOS169).

These represent the first records for Louisiana.

Say's Phoebe (Sayornis saya)

One (89-14) on 1 Oct. 1988, Cameron: East Jetty Road near mouth of

Calcasieu Pass; John P. Sevenair and Curtis C. Sorrells (AB43(1):119).

One (92-53) from 30 Jan.-27 Feb. 1993, *Cameron*: end of Parish Road 115 (extreme NE corner of parish); Michael J. Musumeche, Roger J. Breedlove, Bill Wood, William R. Fontenot, Curtis A. Marantz, Steven W. Cardiff (ph), Gary Broussard (ph only), and Paul E. Conover (ph only)(*AB*47(2):268).

Ash-throated Flycatcher (Myiarchus cinerascens)

One (90-112) on 11 Nov. 1990, *Cameron*: Peveto Beach Woods (Holleyman Sanctuary); Phillip A. Wallace (ph)(*AB*45(1):116).

One (91-31) on 27-28 Apr. 1991, *Cameron*: W side of (town of) Holly Beach at the intersection of Hwys. 82 and 27, Alfred E. and Gwen B. Smalley (ph), Cecil C. Kersting (ph), Curtis C. Sorrells, Phillip A. Wallace, and Curtis A. Marantz (*AB* 45(3):458; *LOS*141).

One female (93-92) on 16 Jan. 1993, *Plaquemines*: 1/4 mi. S of Ft. Jackson; Steven W. Cardiff (LSUMZ 159194)(*AB*47(2):268).

One immature male (93-69) on 21 Dec. 1993, *Vermilion*: Avrico Canal, 5 mi. W of Kaplan, 1.5 mi. E, 1 mi. N of Mulvey; J. V. Remsen (LSUMZ 159193)(*FN* 48(2):217).

One male (94-62) from 21 Dec.-21 Jan. 1994, *Vermilion*: Hwy. 700, 0.5 mi. W of Hwy. 35, N of Kaplan; **Paul E. Conover** (ph), Donna L. Dittmann, and Steven W. Cardiff (LSUMZ 159828)(*FN* 48(2):217).

One immature female (94-101) on 18 Dec. 1994, *Cameron*: Garner Ridge, 3 mi. W of Johnsons Bayou School; Steven W. Cardiff (LSUMZ 160654)(FN49(2):158; LOS164).

One adult female (95-01) on 2 Jan. 1995, *Lafayette*: 1 mi. E of Duson; Steven W. Cardiff (LSUMZ 161280) and Donna L. Dittmann (*FN*49(2):158; *LOS*164; *LOS*166).

One male (95-133) on 22 Feb. 1995, *Plaquemines*: 1/4 mi. S of Ft. Jackson; Steven W. Cardiff (LSUMZ 161281)(*LOS*164). A general reference to Ashthroated Flycatchers in Louisiana during winter 1995 is made in *FN*50(2):181.

One immature female (95-48) from 2-10 Mar. 1995, *Vermilion*: 1 mi. S of Indian Bayou; Steven W. Cardiff LSUMZ (161213) and **Dave Patton** (ph; card)(*LOS*165).

One immature female (95-76) on 24 Sep. 1995, *Cameron*: approx. 5 mi. E of Cameron; Daniel F. Lane (LSUMZ 162208) and Steven W. Cardiff (*)(LOS169).

One immature male (95-120) on 29 Oct. 1995, *Cameron*: Garner Ridge, 3 mi. W of Johnsons Bayou School; Donna L. Dittmann (LSUMZ 162207) and Steven W. Cardiff (*).

One female (95-121) on 29 Oct. 1995, *Cameron*: Garner Ridge, 3 mi. W of Johnsons Bayou School; Steven W. Cardiff (LSUMZ 162206). Records 95-120

and 95-121 were found together. This and the two preceding records were mentioned in FN50(1):68 and LOS169.

Ash-throated Flycatcher was removed from the Review List on 7 Sep. 1996.

Brown-crested Flycatcher (*Myiarchus tyrannulus*)

One immature male (93-93) on 16 Jan. 1993, *Plaquemines*: 1/4 mi. S of Ft. Jackson; Steven W. Cardiff (LSUMZ 159195).

One adult male (93-94) on 16 Jan. 1993, *Plaquemines*: 1/4 mi. S of Ft. Jackson; Steven W. Cardiff (LSUMZ 159196).

One immature male (93-95) on 16 Jan. 1993, *Plaquemines*: 1/4 mi. S of Ft. Jackson; Steven W. Cardiff (LSUMZ 159197). This and the two preceding records are cited in *AB*47(2):268.

One adult female (94-82) on 26 Jan. 1994, *Plaquemines*: 1/2 mi. S of Ft. Jackson; Steven W. Cardiff (LSUMZ 159811).

One immature male (94-83) on 26 Jan. 1994, *Plaquemines*: 1/2 mi. S of Ft. Jackson; Steven W. Cardiff (LSUMZ 159812).

One immature female (94-84) on 26 Jan. 1994, *Plaquemines*: 1/2 mi. S of Ft. Jackson; Steven W. Cardiff (LSUMZ 159813) and Donna L. Dittmann.

One immature male (94-85) on 26 Jan. 1994, *Plaquemines*: 1/2 mi. S of Ft. Jackson; Donna L. Dittmann (*) and Steven W. Cardiff (LSUMZ 159814). This and the preceding record were collected together and represent the first Louisiana records of the western subspecies *magister*. This and the preceding three records are cited in *FN*48(2):217.

One male (95-130) on 28 Jan. 1995, *Plaquemines*: 1/4 mi. S of Ft. Jackson; Steven W. Cardiff (LSUMZ 161282)(*LOS*164). A general reference is *FN*47(2):158.

One adult male (96-70) on 14 Sep. 1996, *Cameron*: approx. 5 mi. E of Cameron; **Steven W. Cardiff** (LSUMZ 162254) and Donna L. Dittmann (*FN*51(1):70, *LOS*177).

Great Kiskadee (Pitangus sulfuratus)

One (93-11) from 26 Nov. 1992-9 Mar. 1993, *Vermilion*: S of Intracoastal City; W. P. Edwards III (ph). This record did not appear in *AB* or *LOS*.

This is the first record of this species reviewed and accepted by the LBRC; this species has not been reported in Louisiana since 1978.

Sulphur-bellied Flycatcher (Myiodynastes luteiventris)

One (89-114) on 11 May 1989, *Cameron*: Peveto Beach Woods (Holleyman Sanctuary); Charles A. Butterworth and Dave Patton (ph)(AB43(3):494).

One immature male (96-53) from 1-2 Oct. 1996, Cameron: Johnsons Bayou,

Douglas W. Faulkner, Brian Gibbons (ph), Steven W. Cardiff (LSUMZ 162256), and Donna L. Dittmann (*)(FN51(1):70; LOS177).

These are the second and third records accepted by the LBRC.

Tropical (Tyrannus melancholicus) or Couch's (T. couchii) kingbird

The following records pertained to either Couch's or Tropical kingbirds, but were not identifiable to one species. They were reviewed as, and accepted as part of, the Tropical/Couch's species complex.

One (91-29) on 27-28 Apr. 1991, *Cameron*: Holly Beach; Alfred E. and Gwen B. Smalley (ph), **Curtis C. Sorrells** (ph), John P. Sevenair, **Phillip A. Wallace** (ph), Curtis A. Marantz, and Kenneth V: Rosenberg (ph only)(*AB*45(3):458; *LOS*141).

One (92-23) on 15 Feb. 1992, *Jefferson Davis*: Parish Road 7-7, just N of Parish Road 7-7a; Curtis A. Marantz (ph) and Mark Swan (ph). The bird vocalized only once, a "chu-zwee" or "blreet" call when it was attacked by a Loggerhead Shrike. This call was unfamiliar to the observers, and they did not believe that they could assign the bird to species based on the single call heard; no recordings were made of the call (*AB*46(2):278; *LOS*147).

Cassin's Kingbird (Tyrannus vociferans)

One adult female (91-42) on 27 Oct. 1991, *Cameron*: approx. 5 mi. E of Cameron; **Andrew W. Kratter** (LSUMZ 154280) and J. V. Remsen (*AB*46(1):106; *LOS*145). This is the second record for Louisiana.

Gray Kingbird (Tyrannus dominicensis)

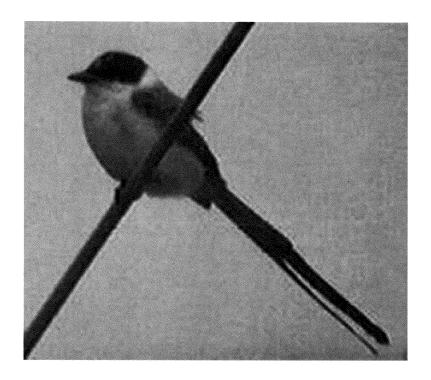
One adult (91-30) on 26 May 1991, *Jefferson*: E. end of Grand Isle; Phillip A. Wallace and Curtis C. Sorrells (*AB*45(3):458; *LOS*141).

One bird (93-52) on 7 Nov. 1993 and presumably the same bird on 5 Dec. 1993, *Plaquemines*: Venice, Coast Guard Station; R. D. Purrington, Norton Nelkin, Joseph P. Kleiman, and Gayle Strickland (ph only)(*AB*48(1):119;(2)217).

One (94-69) on 18 May 1994, *Jefferson*: Grand Isle; Donna L. Dittmann and Steven W. Cardiff (ph)(*FN*48(3):309; *LOS*159).

Fork-tailed Flycatcher (Tyrannus savanna)

One (96-46) on 15 Nov. 1996, *Vermilion*: Aspazl Rd. off of Dewberry Rd., near Lelieux; Paul E. Conover (ph) and **Gary Broussard** (ph)(*LOS*177). This record did not appear in *FN*. This is the first record for Louisiana.



Fork-tailed Flycatcher (96-46) near Lelieux, Vermilion Parish, Louisiana, 15 November 1996. Photograph by Paul E. Conover.

Bell's Vireo (Vireo bellii)

One (91-43) on 7 Sep. 1991, *Iberville*: 3.7 mi. N of St. Gabriel, 545 Pecan Drive; J. V. Remsen (*AB* 46(1):106; *LOS*145; Remsen et al., 1998).

One (93-20) from 3-27 Jan. 1993, *Plaquemines*: Venice; **Kenneth V. Rosenberg** (ph only) and Alfred E. Smalley (ph)(*AB*47(2):268; Remsen et al. 1998.

One immature female (95-34) from 25 Feb.-10 Mar. 1995, *Vermilion*: 1 mi. S of Indian Bayou; Steven W. Cardiff (LSUMZ 161214) and **Paul E. Conover** (ph only)(*FN*49(3):263; Remsen et al., 1998). Identified to subspecies *medius* (Remsen et al. 1996).

One singing male (96-43) on 16 June 1996, *Claiborne*: approx. 1 mi. W of Marsalis; Joseph P. Kleiman (microcassette tape)(*LOS*175; *LOS*176; Remsen et al. 1998).

Yellow-green Vireo (Vireo flavoviridis)

One male (92-34) from 2-3 May 1992, *Cameron*: Smith Ridge, approx. 3 mi. NW of Johnsons Bayou School, **David P. Muth**, Alfred E. and Gwen B. Smalley (ph), Curtis A. Marantz, and Steven W. Cardiff (LSUMZ 154286) (Remsen et al. 1996; *AB*46(3):437; Remsen et al. 1998). Identified to subspecies *flavoviridis* (Remsen et al. 1996).

Black-whiskered Vireo (Vireo altiloquus)

One (89-4) on 18 May 1988, *Jefferson*: Grand Isle; Norton Nelkin (*AB* 42(3):448; Remsen et al., 1998).

One adult (91-21) on 8 May 1991, *Jefferson*: Grand Isle; Curtis C. Sorrells (*AB*45(3):459; *LOS*141; Remsen et al. 1996).

One male (92-46) on 6 June 1992, *Cameron*: Peveto Beach Woods (Holleyman Sanctuary); Curtis C. Sorrells, **Gwen B.** and Alfred E. **Smalley**, John P. Sevenair and Phillip A. Wallace (ph)(*AB*46(5):1146).

One (92-47) on 25 May 1992, *Jefferson*: Grand Isle (Cemetery Woods), David P. Muth (Remsen et al. 1996; Remsen et al. 1998). Vague reference ("numbers seen from Dauphin Island to Grand Isle") in *AB*46(3):436.

One female (93-96) on 16 Apr. 1993, *Cameron*: 0.3 mi. S of Hwy. 82 at Johnsons Bayou; net casualty from Neotropical Migrants Project (LSUMZ 159436) and Donna L. Dittmann (*)(Remsen et al. 1998).

Clark's Nutcracker (Nucifraga columbiana)

One (97-09) from 9-11 Feb. 1997, *Natchitoches*: Kisatchie National Forest on Longleaf Pine Vista Road, 0.4 mi. W of Caroline Dorman Trail; **B. Mac Myers III** (ph), **Phillip A. Wallace** (ph); Matt Pontiff (ph) and Joseph P. Kleiman (*FN*51(3):759 includes a photo by Pontiff; also found by Curtis C. Sorrells). The bird had a noticeably deformed bill with crossed, abnormally long mandibles. The record coincided with a pattern of nutcracker occurrences in the Southwest and Midwest (*FN*51(1);89;97;100;112;116; *FN*51(3);756;767;771;791;795;798). The bill was considered a natural deformity rather than a result of a captive/assisted origin, and there were no other obvious signs of cage-wear.

Cave Swallow (Petrochelidon fulva)

Six (including at least two pairs with nests; 97-22) from 17 Apr.- 5 July 1997, *Cameron*: Sabine Pass, E. end of Hwy. 82 bridge; **Jonathan L. Dunn**, Steven W. Cardiff (ph), Donna L. Dittmann (card), Joseph P. Kleiman, and Laurence C. Binford. This represents the second record for Louisiana (*FN*51(4):883, includes ph by Cardiff). Both this and the first record (Dittmann 1995) pertain to the subspecies *pallida* of the southwestern USA and northern Mexico.

J. La. Ornith.

Rock Wren (Salpinctes obsoletus)

One (91-04) on 15 Dec. 1990, *Catahoula*: Louisiana Delta Plantation Farms; Kermit C. Cummings (*AB*45(2):285).

Northern Wheatear (*Oenanthe oenanthe*)

One immature (91-32) from 23 Oct.-1 Nov. 1991, *Orleans*: New Orleans East, Folger's Coffee Plant on Gentilly Road; David P. Muth (ph), Christopher G. Brantley, John P. Sevenair, Alfred E. and Gwen B. Smalley (ph), Curtis A. Marantz (ph), Kenneth V. Rosenberg (ph), and R. D. Purrington (ph)(found by Jennifer Coulson)(*AB*46(1):106,167, includes ph by Smalley on pg. 167; *LOS*145).

One in fresh basic female-type plumage (93-17) from 17 Dec. 1992-27 Feb. 1994, *Acadia*: approx. 2.5 mi. S of the S edge of Crowley, 1 mi. W of Hwy. 13; **Donna L. Dittmann** and **Steven W. Cardiff** (ph), William R. Fontenot, Paul M. McKenzie, Gwen B. and Alfred E. Smalley, Bill Wood, John P. Sevenair, Curtis A. Marantz, Jonathan L. Dunn, and Paul E. Conover (ph only)(end date of "27 Feb." from *AB*47(2):268; *LOS*151.)

One (95-109) from 11-14 Oct. 1995, *Calcasieu*: Ellis Moss Rd., 1.7 mi. W from Hwy. 27; **Jeanne F. Sachs**, Matt Pontiff (ph) and Joseph P. Kleiman (ph)(*FN*50(1):68; *LOS*169).

There is only one previous record from Louisiana (12 Sep. 1888; Lowery 1974). A 1995 record from Shreveport is pending.

Mountain Bluebird (Sialia currucoides)

One male in first basic plumage (93-18) from 30 Jan.-9 Feb. 1993, *Acadia*: Hwy. 13, 2.1 mi. S from junction of Hwy. 3007, approx. 5 mi. S of Crowley; Paul E. Conover (ph), Michael J. Musumeche, Roger J. Breedlove, Bill Wood, Curtis A. Marantz (ph), John P. Sevenair, Alfred E. and Gwen B. Smalley (ph), and Cecil C. Kersting (ph)(*AB*47(2):268; *LOS*151).

One (95-107) on 9 Oct. 1995, *St. Bernard*: Chalmette, "BFI" Crescent Acres Landfill; David P. Muth (ph)(*FN*50(1):68; *LOS*169.)

These are the third and fourth records accepted by the LBRC. Three additional records, including two specimens, have not been reviewed.

White Wagtail (Motacilla alba)

One adult male in basic plumage (96-52) on 12 Oct. 1996, *Cameron*: Hackberry Ridge, 2 mi. W of Johnsons Bayou School; Louise M. Hanchey, Steven R. Emmons (ph) and **Matt Pontiff** (ph)(*FN*51(1)71; *LOS*177). Photographs indicate subspecies *ocularis*. This represents the first record of any wagtail for Louisiana and the first record of a White Wagtail for the region.



Adult male White Wagtail at Hackberry Ridge, Cameron Parish, Louisiana, 12 October 1996. Photograph by Steve Emmons.

Tropical Parula (Parula pitiayumi)

One adult male (92-04) from 10-28 Feb. 1992, *Lafayette*: Lafayette, 800 block of S. College Road, woods at Belle River Townhomes; **Dave Patton**, Roger J. Breedlove, Curtis A. Marantz, Alfred E. Smalley, and Paul E. Conover (ph) (*AB*46(2):278; *LOS*147).

This is the third accepted record by the LBRC.

Black-throated Gray Warbler (Dendroica nigrescens)

One immature female (90-109) on 11 Nov. 1989, *Cameron*: Johnsons Bayou; **Donna L. Dittmann**, Steven W. Cardiff (LSUMZ 152216)(*AB*44(1):108).

One (probable immature) male (90-80) on 27 Oct. 1990, *Cameron*: Peveto Beach Woods (Holleyman Sanctuary); John P. Sevenair, Mark Swan, and Greg W. Lasley (*AB*45(1):117).

One adult male (91-11) on 30 Dec. 1990, *Plaquemines*: Venice (near the radio tower); Andrew W. Kratter (drawing)(*AB*45(2):285).

One male (94-64) from 2-26 Jan. 1994, *Plaquemines*: 1/4 mi. SE of Fort Jackson; Steven W. Cardiff (LSUMZ 159819) and Donna L. Dittmann (*AB* 48(2):217). Most likely the same individual, originally found by R. D. Purrington and Allan Strong, on the Venice CBC (*FN*48(4):697,890).

Townsend's Warbler (Dendroica townsendi)

One (90-113) on 13 Sep. 1990, *Jefferson*: Grand Isle, Nacarri Drive; Alfred E. and **Gwen B. Smalley** (*AB* 45(1):117).

One (93-73) from 16-19 Dec. 1993, *Cameron*: Oak Grove, Rutherford Motel; Melvin Weber, Robby Bacon, Jim Holmes, Joseph P. Kleiman, Mark Swan, and Paul E. Conover (ph only)(*FN*48(2):217).

These represent the fourth and fifth accepted records.



Connecticut Warbler (93-41) banded at Johnsons Bayou, Cameron Parish, Louisiana, 28 April 1993. Photographed by Doug Wechsler (©VIREO) upon release.

Connecticut Warbler (Oporornis agilis)

One (93-41) on 28 Apr. 1993, *Cameron*: Johnsons Bayou; Dawn Brenner and Doug Wechsler (ph; VIREO 16-4; W02/17/033 DC). The bird was netted, banded, and photographed in flight during release. This represents the first accepted record for Louisiana.

MacGillivray's Warbler (Oporornis tolmiei)

One adult male (93-22) on 23 Feb. 1993, *Plaquemines*: near Fort Jackson; **Peter H. Yaukey** and David P. Muth (*AB*47(2):268).

This is the seventh record for Louisiana.

Painted Redstart (Myioborus pictus)

One male (94-55) from 17 Dec. 1994-5 Mar. 1995, *Cameron*: Hackberry, at end of Hwy. 385; **Richard S. Bello**, Phillip A. Wallace (ph), Joseph P. Kleiman, Mark Swan (tape), Rosemary Seidler (ph), and Steven W. Cardiff (ph)(*FN*49(2):159; *FN*49(3):263; *LOS*164; *LOS*165). This represents the second state record and the first with photographic documentation.

Western Tanager (Piranga ludoviciana)

One male (91-48) on 7 Oct. 1984, *Cameron*: Peveto Beach Woods; **Joseph P. Kleiman** and Karl Overman (ph only).

One female or immature male (89-139) on 24 Oct. 1987, *Cameron*: Peveto Beach Woods (Holleyman Sanctuary); John P. Sevenair and Curtis C. Sorrells (*AB*42(1):91).

One immature female (89-141) on 8 Oct. 1989, *Cameron*: Johnsons Bayou; Steven W. Cardiff (LSUMZ 152190) (*AB*44(1):108).

One immature female (89-140) on 22 Oct. 1989, *Cameron*: approx. 5 mi. E of Cameron; Steven W. Cardiff (LSUMZ 152191)(*AB*44(1):108).

Two males (91-25) on 28 Apr. 1991, *Cameron*: Cameron; Phillip A. Wallace, Curtis A. Marantz, and Curtis C. Sorrells (*AB*45(3):459).

Three, one female and two males (91-27), on 4-5 May 1991, *Cameron*: Cameron; Curtis A. Marantz (males found by Cerise Cauthron); males may have been same birds as in 91-25 (*AB*45(3):459).

One male in alternate plumage (91-28) on 1 May 1991, *Cameron*: Hwy. 82, approx. 1 mi. W of (town of) Holly Beach; Paul E. Conover (ph)(*AB*45(3):459, 510 includes ph by Conover on pg. 510).

One male in basic plumage (91-46) on 16 Dec. 1991, *Cameron*: Oak Grove; Ronald J. Stein (*AB*46(2):278).

One adult male (94-59) from 15-26 Jan. 1994, *Plaquemines*: Fort Jackson; **Joseph P. Kleiman**, Phillip A. Wallace, and Steven W. Cardiff (LSUMZ

159817) (FN 48(2):218).

One adult male in basic plumage (96-07) on 24 Feb. 1996, *Cameron*: Parish Road 615 and Hwy. 82 at Calcasieu River ship channel; Matt Pontiff (ph)(*FN*50(2):182; *LOS*171).

Lark Bunting (Calamospiza melanocorys)

One (94-58) on 21 Sep. 1991, *Lafourche*: beach at Port Fourchon, about 2.4 mi. E of Hwy. 3090; B. Mac Myers III (ph) and Curtis C. Sorrells (AB 46(1): 107; LOS145). Reported in AB as the "4th state record"; it is actually the third accepted record.

One male mostly in alternate plumage (95-90) on 17 Sep. 1995, *Cameron*: Johnsons Bayou, Hwy. 27 at intersection Gulfview Ave.; Daniel F. Lane, J. V. Remsen (LSUMZ 162240), and Steven W. Cardiff (*)(FN50(1):69; LOS169).

Golden-crowned Sparrow (Zonotrichia atricapilla)

One immature female (93-77) from 18 Dec. 1993-7 Feb. 1994, *Cameron*: Hwy. 27/82 near West Jetty of Calcasieu River; **B. Mac. Myers III**, Steven W. Cardiff (LSUMZ 160683), and Donna L. Dittmann (*)(*FN*48(4):695,890.

Smith's Longspur (Calcarius pictus)

Three or four in basic plumage (92-06) from 1-2 Feb. 1992, *Caddo*: Shreveport, Shreveport Municipal Airport; Roger J. Breedlove, Charles E. Lyon, and John P. Sevenair (*AB*46(2):279; *LOS*147).

Chestnut-collared Longspur (Calcarius ornatus)

One adult female (93-87) on 11 July 1993, *Cameron*: approx. 2 mi. W of old mouth Mermentau River (Rutherford Beach); **Steven W. Cardiff** (ph; LSUMZ 154253), **Donna L. Dittmann**, and Beverly Smiley (ph only)(*AB*47(5):1118).

Black-headed Grosbeak (Pheucticus melanocephalus)

One immature male (94-49) on 28 Jan. 1979, *East Baton Rouge*: Baton Rouge, near the intersection of Sharp Road and Florida Boulevard; Paul M. McKenzie and Peter Osenton (ph only)(*AB*33(3):290).

One female (93-66) from 17 Dec. 1993-5 Jan. 1994, *Lafayette*: Lafayette, Paul E. Conover (card), **George O.** (ph) and **Nettie Broussard** (*FN*48(4):693; *LOS*166).

One male (94-67) from "before Christmas" 1994-8 Mar. 1995, *Lafayette*: Lafayette (residence of Rose and Wayne Barras (ph); Paul E. Conover (ph)(*FN*49(3):263; *LOS*166).

One immature male (95-144) from 7-14 Dec. 1995, Lafayette: Lafayette,

Memory Lane (residence of and found by Dave Patton); Paul E. Conover (ph)(LOS171).

Lazuli Bunting (Passerina amoena)

One male (97-19) from 30 Apr.-3 May 1997, *Calcasieu*: 5 mi. W of Sulphur on Choupique Rd.; Phillip A. Wallace, Matt Pontiff (ph only), found by Leonard East (*FN*51(4):883, includes ph by Pontiff; *LOS*159). This represents the second accepted record for Louisiana and the first spring record.

Shiny Cowbird (*Molothrus bonariensis*)

One male (92-30) from 20-25 Apr. 1992, *Jefferson*: Grand Isle, Willow Lane one block from Hwy. 1; **Alfred E. Smalley** and Joseph Feldner (ph only)(*AB*46(2):279).

One male (94-13) on 13 Mar. 1994, *Cameron*: W of Holly Beach near Cameron State Bank; Paul E. Conover (ph)(FN48(3): 309; LOS159).

One male (95-50) on 22 Apr. 1995, *Jefferson*: Grand Isle; William R. Fontenot (ph). This is likely one of two birds reported 14 Apr.-8 May in *FN*49(3):264.

Two males (97-18) from 17-25 May 1997, *Jefferson*: Grand Isle; B. Mac Myers III (ph), Phillip A. Wallace, John P. Sevenair, and Joseph P. Kleiman (ph)(*FN*51(4):884).

Hooded Oriole (*Icterus cucullatus*)

One adult male (93-61) from 21 Jan.-26 Feb. 1994, *East Baton Rouge*: Baton Rouge, 704 7th Street (residence of Pat McDonald); **Jim Lee** (ph), John P. Sevenair, Joseph P. Kleiman, Charles E. Lyon, and Paul E. Conover (ph)(*FN*48(2):218). This record is the second accepted record for the state, and the first winter record; a spring 1989 record is still pending.

Bullock's Oriole (Icterus bullockii)

One immature male (95-131) on 22 Feb. 1995, *Plaquemines*: Tidewater; Steven W. Cardiff (LSUMZ 161351); presumably the same bird reported by Roger J. Breedlove (card-no details) on 29 Jan. (*LOS*164).

Scott's Oriole (Icterus parisorum)

One immature male (90-12) from 21 Jan.-2 Mar. 1990, *St. Landry*: 2 mi. W of Eunice on Hwy. 190; **Bonnie Ardoin** and Joseph P. Kleiman (*AB*44(2):283).

One adult male (90-103) from 12-17 Oct. 1990, St. Charles: Norco; Harold Cambre (ph).

House Finch (Carpodacus mexicanus)

One adult male (88-12) on 24 Mar. 1988, *Vermilion*: Abbeville; William R. Fontenot (card, ph)(*AB*42(3):449).

At least three adult males (89-162) on 13 Dec. 1989, *Lafayette*: just E of Cankton; Henry Miller (*AB*44(2):283).

Four individuals, including two adult males (90-11) on 14 Dec. 1989, *Lafourche*: Thibodaux, 626 Fairway Drive (residence of Michael Rhodes); Richard S. Bello (ph)(*AB*44(2): 283).

Two males and four to six females (90-77) on 13 Nov. 1990, *Lafayette*: approx. 1 mi. S of Lafayette, intersection of Hwy. 167 and Hapsburg Lane; Charles A. Butterworth (*AB*45(1):117).

House Finch was removed from the Review List 18 May 1991 (Dittmann 1995).



Adult male Hooded Oriole (93-61) at Baton Rouge, East Baton Rouge Parish, Louisiana, 21 January - 26 February 1994. Photographed through a spotting telescope by Paul E. Conover.

Unaccepted Records (Identification Questionable)

A record is considered "unaccepted" if, during any of the first three circulations, it receives four or more "reject" votes. If the record does not

receive a deciding vote during one of these circulations, then the record is discussed and voted on at an annual meeting with all Members present. The outcome of this "Discussion vote" is final; a record must receive six or seven "yes" votes to become accepted.

Many of the records listed below had a non-unanimous vote; some Members supported the identification of a specific record and other Members did not. Each Member has his/her own personal criteria for record acceptance. The end result is, in theory, a conservative assessment of a record's validity. Sometimes, good records may be considered unacceptable because there was a lack of hard evidence (a diagnostic photo, video, or tape-recording) and/or the written details were somehow ambiguous. All too often, observers do not take the time to go into detail about a bird's appearance and behavior and the end result is a Such a description can only be interpreted as a superficial description. "superficial" observation. "Field-guide"-type descriptions are generally too brief to document rarities. Field-guides are designed to direct observers to specific identification marks that allow a species to be recognized. Although many, especially the more recent, field guides also direct the observer to different plumages, ages, and geographic variations, rarely does an individual bird perfectly fit the "field-guide" description. Each bird is an individual; for that reason, the LBRC requests information describing the particular individual(s) seen, rather than just a listing of the "typical" fieldmarks. If more than one individual is reported during a period in the same vicinity, it may be possible to recognize separate individuals with detailed descriptions, and to determine if multiple birds were present. For that reason it is necessary to provide as much information about the bird as possible, as well as to note behavioral characters and the events surrounding the discovery. A seemingly trivial comment about the bird's movements, foraging behavior, etc., can sometimes make the difference for a particular Committee Member's decision based on his/her knowledge of the species involved. Writing details for certain species or groups can be notoriously difficult. Gull identification, for example, is particularly complex due to plumage variation associated with age, season, and individual and geographic differences, as well as hybridization. So, the description must accurately portray the bird's appearance, summarize characters or combinations of characters that are diagnostic for the species, as well as convincingly eliminate similar species and potential hybrids.

The identification of the following records was considered unsatisfactory. A brief discussion of why the record was not accepted accompanies each entry.

Ross's Goose (Chen rossii)

One adult (89-75) on 29 Jan. 1989, *Cameron*: NE corner of parish on Hwy. 717.

J. La. Ornith.

One bird (89-94) on 4 Mar. 1989, *Jefferson Davis*: approx. 1 mi. W of the intersection of Hwys. 99 and 14.

Although all Members believed that the birds involved in these two records were *probably* correctly identified, both records were accompanied by only brief and vague descriptions. For example, for record 89-75, the observer did not note (or possibly observe) bill characteristics, especially whether the bird lacked a "grinning" patch. All Members agreed that record 89-94 should be considered unacceptable because bill characteristics were not discussed. A runt Snow Goose (*C. caerulescens*) or a Snow X Ross's goose hybrid could not be eliminated in either case.

Northern Goshawk (Accipiter gentilis)

One immature (92-65) on 17 Oct. 1992, *Jefferson Davis*: intersection of Hwy. 99 and parish road 7-7A. The bird was first observed sitting on the ground in a field and when approached, flew up to a utility pole cross bar. The bird was photographed, but the photograph is underexposed. The description included: "about the size of a Red-tailed Hawk, long-tailed, eye light brown in color, large white eyebrow, and buffy below." The habitat, behavior, and description is much more suggestive of immature Swainson's Hawk; although not conclusive, the photo also supports that identification.

Rough-legged Hawk (Buteo lagopus)

One (90-104) from 8-29 Jan. 1989, *Madison*: Mississippi River levee 6 mi. SW of Delta (*AB*44(2):281). The observer initially identified the bird as a "Harlan's" Red-tailed Hawk, but was unsure of the identification because the bird seemed to possess characteristics of both "Harlan's" and Rough-legged hawks. To help resolve the identification, the observer submitted detailed notes of his observation to the LBRC, including drawings of the hawk. After review, all Members believed the description better fit an aberrantly-plumaged Redtailed or a "Harlan's" Red-tailed Hawk than a Rough-legged Hawk.

Golden Eagle (Aquila chrysaetos)

One adult (92-16) on 5 Jan. 1992, *Madison*: Tensas River NWR, Spring Bayou (next to McLemore tract). The observer provided only a very brief description, and all Members were in agreement that the supporting details were insufficient to support the identification of this species.

Black Rail (Laterallus jamaicensis)

One bird (90-44) on 10 May 1990, *Orleans*: New Orleans. This report involved a bird found dead inside an industrial plant adjacent to a canal.

Unfortunately, the carcass was not saved. The description was rudimentary and did not provide enough detail to substantiate this record.

Red-necked Phalarope (Phalaropus lobatus)

One bird (89-154) from 4-9 Sep. 1989, *Lafourche*: E of Fourchon Road, "Fourchon Pond" (*AB*44(1):106). Because of the great distances at which this bird was observed, most Members believed that it would have been difficult to separate Red-necked from Red Phalarope (*P. fulicaria*). Also of concern was the fact that a Red Phalarope was found a few weeks later at the same location. This record is best left as Red/Red-necked phalarope.

Parasitic Jaeger (Stercorarius parasiticus)

One light morph in basic plumage (89-127) on 4 Jan. 1987, *Lafourche*: off Fourchon Beach. This was a very brief sighting, about 45 seconds, as the jaeger harried a Laughing Gull and Forster's Tern. The observer reported that there were no projecting central tail feathers and the bird's age could not be determined from the observer's description. Estimation of size varied between the reporting observer and two other birders present. Because no definitive characters were observed, it is difficult to determine the identity of this bird and eliminate the possibility that it was not a Pomarine Jaeger, currently thought to be the more regularly occurring species.

California Gull (Larus californicus)

Three (89-111) on 17 Dec. 1987, *Cameron*: S of Little Chenier Road (*AB*42(2):276). The observer provided insufficient details of the bird's plumage and soft part colors (especially leg color) to eliminate other species, particularly Herring Gull (*L. argentatus*). All Members commented that the probability of three birds occurring together in a relatively small resting group of other gulls (24 Ring-billed Gulls, *L. delawarensis*) was low.

Thayer's Gull (Larus thayeri)

One in first basic plumage (89-129) on 3 Mar. 1988, *St. Bernard*: Chalmette, "BFI" Crescent Acres Landfill. The relationships of the Thayer's/Iceland/ Herring gull complex and the field characteristics of the group remain uncertain. From our current knowledge of Thayer's Gull plumages and the description and photographs of this record, Herring, or the Kumlien's subspecies of Iceland Gull (*L. glaucoides kumlieni*), or a possible hybrid (Herring X Iceland) could not be eliminated by the photographs or the observer's descriptions.

Lesser Black-backed Gull (Larus fuscus)

One (90-8) on 13 Jan. 1990, *Lafourche*: on an interior lagoon at Fourchon Beach (*AB*44(2):282). Leg and iris colors were not noted in the description. This information is necessary to properly identify this species and eliminate all other species and potential hybrids.

One adult (87-22) on 25 Oct. 1987, *Cameron*: W. end of Peveto Beach. This record went three circulations without a deciding vote, which necessitated a "Discussion Vote" at an annual meeting. Although Lesser Black-backed Gull has become more regular in Louisiana, there were still few accepted records at the time of the observation and through the period of initial circulations of this record. Some Members were concerned with the circumstances of the observation, particularly the distant viewing conditions. The outcome of the discussion vote considered the record "unaccepted."

Great Black-backed Gull (*Larus marinus*)

One very worn bird in first alternate plumage (89-122) on 3 June 1989, *Cameron*: Rutherford Beach. Photographs included with this record did not support the identification of a Great Black-backed Gull and did not eliminate the possibility that the bird was instead an atypical Herring Gull.

One in first basic plumage (90-9) on 18 Feb. 1990, Cameron: just W of (town of) Holly Beach (AB44(2):282). The supporting details were exceptionally brief and not adequate to identify this species.

Arctic Tern (Sterna paradisaea)

One sub-adult (92-44) on 6 June 1992, *Lafourche*: Bay Champagne at end of Fourchon Road. The identification was based on "white cheek patch and shorter legs compared to adjacent Common and Forster's terns." The bird was not well-observed in flight. Because of potential confusion with Common Tern and because one of the two observers expressed some doubt regarding the bird's identification, the record was considered unacceptable.

Lesser Nighthawk (Chordeiles acutipennis)

Reported as "nesting," (presumably) two birds (82-50) on 20 June 1970, *Vermilion*: Rainey Sanctuary (Tern Island). The only identification mark provided was that the white wing patch was "closer to the wing tip." The Committee considered the description inadequate to eliminate the more likely Common Nighthawk (*C. minor*).

One bird (89-81) on 17 Dec. 1988, *Cameron*: East Jetty Woods, 2 mi. S of Cameron (*AB*43(2):326). Due to the very brief observation time (approx. 7 seconds) and poor light (observation at dusk), most Members believed that this

record was best left as "nighthawk, sp.," despite the experience and expertise of the observer.

One bird (89-87) on 11 Dec. 1988, *Plaquemines*: Fort Jackson. Two of three observers submitted reports. The descriptions were very brief and did not eliminate Common or Antillean nighthawks to the satisfaction of the majority of Committee Members.

Vaux's Swift (Chaetura vauxi)

Two or three (89-52) from late Oct.-24 Dec. 1988, St. John the Baptist: Laplace, 91 Holly Street (AB43(1):118, AB43(2):327). Three circulations without a deciding vote necessitated a "Discussion Vote" at an annual meeting. This record generated quite a debate regarding the general assumption that late fall and wintering Chaetura swifts in Louisiana are Vaux's. There are six specimens of Vaux's Swift from Louisiana (all from the same swift roost in 1939: 1 on 9 Feb., 4 on 15 Feb., and 1 on 14 Oct.). Based on this evidence, Louisiana records of late fall and winter swifts have generally been assumed to be this species (Lowery 1974). Unfortunately, distinguishing silent Chaetura species is difficult even under ideal circumstances because much of the identification is based on subjective characters. In the absence of diagnostic characters (in the case of this record, the birds did not vocalize), the Committee was not inclined to accept the record as Vaux's Swift by "default." Late or wintering Chimney Swift (C. pelagica) is probably the most likely species to occur in Louisiana during this period, but other species of tropical Chaetura are at least long-shot possibilities. Further documentation (specimens, vocalizations, and possibly excellent photographs) will be necessary to fully establish the status of this species in fall and winter.

Red-naped Sapsucker (Sphyrapicus nuchalis)

One adult male in definitive plumage (89-159) from 12 Nov. 1989-11 Feb. 1990, *Orleans*: New Orleans, Lake Vista subdivision (*AB*44(1):107, *AB*44(2):282). This bird possessed a red nape patch, but the rest of the bird's plumage was more consistent with Yellow-bellied Sapsucker (*S. varius*): 1) nape patch on white rather than black background; 2) broad white supercilium/postocular stripe that widens as it approaches the nape; 3) prominent and complete-looking black malar stripe; and 4) white lores-to-cheek stripe relatively broad and widens posteriorly. Therefore, the bird was probably more likely either a hybrid or an aberrant Yellow-bellied, rather than a pure Rednaped. In addition, several experienced observers saw this bird and submitted commentary indicating it was a "red-naped" Yellow-bellied Sapsucker rather than a true Red-naped Sapsucker. This record, with its many excellent reports

and series of photographs, illustrates the potential difficulty in attempting to identify all individuals in this complex.

Brown-crested Flycatcher (*Myiarchus tyrannulus*)

One (91-35) on 21 Sep. 1991, *St. John the Baptist*: Reserve. The difficulty of distinguishing this species from the more regularly occurring Ash-throated Flycatcher (*M. cinerascens*) is underestimated. The observer did not hear the bird or note the pattern of the tail feathers. There were no photographs.

Bachman's Warbler (Vermivora bachmanii)

One adult male (91-03) on 23 Feb. 1991, *St. Charles*: south levee of the Bonnet Carre Spillway. The description lacked sufficient details and supporting photographs that would be necessary to accept a modern-day report of such a rare and *possibly extinct* species.

Chestnut-collared Longspur (*Calcarius ornatus*)

One bird in partial breeding plumage (90-68) on 9 Jan. 1988, *Madison*: Mississippi River levee, about 3 mi. S of Delta. The identification was based primarily on a "yellow face that contrasted sharply with black facial markings and red nape." The observer was not confident of the identification because of the rather brief observation (less than a minute) and had no prior experience with that species. The Committee believed that the details were not sufficient (bird not heard, tail pattern not described) to eliminate Lapland Longspur (*C. lapponicus*), which could show a similar head pattern by late winter.

Snow Bunting (Plectrophenax nivalis)

One adult male (90-78) on 25 Oct. 1990, *Tangipahoa*: Amite. The details were considered inadequate to support what would represent a first state record. Although the observer indicated fair confidence in the identification, the observer was not 100% positive (as indicated on the Report Form). Some of the characters noted by the observer were incorrect for Snow Bunting (notably a white rump). The observer did address the possibility of an albinistic individual, but was confident that the bird was not a partial albino Snow Bunting or other species. The early date and odd locality (fast food restaurant) were also considered problematic.

Black-headed Grosbeak (Pheucticus melanocephalus)

One adult female (90-72) on 3 Jan. 1990, *Rapides*: Tioga. This record illustrates the potential pitfalls of distinguishing immature male Rose-breasted Grosbeak (*P. ludovicianus*) from female Black-headed Grosbeaks. Immature

male Rose-breasteds often have very tawny breasts with fine streaking at the sides, but most have a smattering of pink feathers (forming a patch of varying size) in the center of the chest. Unfortunately, in the field the pink feathers may "blend" into the tawny breast, creating an illusion of orange. The photo that accompanied the record showed a bird with a very "orange" breast, but, on close inspection, pink feathers were present. This is actually one of few well-documented records of a winter Rose-breasted Grosbeak.

Lawrence's Goldfinch (Carduelis lawrencei)

Two (93-23) on 19 Dec. 1992, *Cameron*: Cameron. The observer reported "two birds flying overhead, calling "tink-el." The lighting conditions were very poor and the observer was not able to see plumage details, except that the birds were small, had short conical bills, and deeply notched tails. The observer believed that the observation should be considered only hypothetical. This would have represented the first state record.

Unaccepted Records (Identification Accepted, but Origin Questionable)

A record may be questioned if there is a reason to suspect that a bird's arrival in Louisiana was the result of direct or indirect human assistance. Most records pertain to direct escapes from captivity (zoos or private aviaries). It is often difficult to assess whether a bird has been held in captivity because there may be no obvious physical signs of being kept in a cage (tattered plumage, dull or damaged bill, dull toenails). Usually, the first consideration is whether the species is commonly kept in captivity. The native distribution of the species is addressed to determine whether the species is a good candidate to stray to Louisiana. Obviously, resident birds from distant continents are not good candidates for vagrancy. This determination is not always clear cut, especially if a species is a long-distance migrant. Records may be initially rejected in the absence of an established pattern of vagrancy. Once a "pattern" develops, records can be re-evaluated based on the new evidence.

Occasionally, adaptable species escape (or are deliberately released) in such numbers that they sometimes establish viable feral populations. These populations have to be monitored to determine whether a species has become truly "established," which occurs when the species is successfully breeding and its population and distribution are stable or expanding. Once a species is determined to be established, it can be added to the state list as "introduced." In some cases, species have first become established outside Louisiana and later appear in the state as "secondary" dispersers or colonists. In these cases, the first

acceptable records involve "pioneers," not necessarily established local breeders. Recent examples of successful Louisiana "secondary" colonists are House Finch and Eurasian Collared-Dove. Monk Parakeet continues to be scrutinized as a potential "introduced species." It is reported as common in some neighborhoods in the greater New Orleans area, but little information is currently on file regarding total population size, number of "colonies," or reproductive success. It remains difficult to assess whether the population is self-sustaining through breeding of feral birds or whether there is continuous or periodic recruitment of new escapes. Additionally, a species longevity has to be considered. Parrots are relatively long-lived birds, and persistence of original individuals combined with augmentation by additional escapes may be misinterpreted as successful breeding and population expansion.

The following records were considered unacceptable based on origin.

Harris's Hawk (Parabuteo unicinctus)

One adult (93-01) on 10-11 Dec. 1992, *Calcasieu*: Edgerly, intersection of Hwy. 90 and Hwy. 388 (*AB*47(2):267). This bird actually flew towards the observer and was relatively tame. The bird's plumage was reported to be in good condition, but its right foot appeared injured or paralyzed. There were no accepted records of this species at the time of review. Rumors persist regarding intentional releases of Harris's Hawks in the Lake Charles area during this period as an attempt by falconers to establish a breeding population. The status of Harris's Hawk will remain problematical, because they are commonly used by falconers and are subject to accidental release. Each record will be considered on its own merits until a pattern of vagrancy is demonstrated outside the one irruption year (see Harris's Hawk account in Accepted Records section).

Ring-necked Pheasant (Phasianus colchicus)

One adult male (95-68) on 27 May 1995, *Cameron*: Gum Cove Ferry at Intracoastal Canal (ph). Although small numbers may persist for short periods near sport hunting release sites, there is no evidence that this species is established as a viable permanent resident in Louisiana.

Monk Parakeet (Myiopsitta monachus)

One to three individuals (90-5) on 25 Feb. 1990, *Orleans*: New Orleans. This record was rejected due to the uncertain status of this species in Louisiana. The LBRC welcomes submission of additional records and other data on breeding and population dynamics, without which the Committee is unable to analyze status and trends for future considerations of adding this species to the state list.

Eurasian Jackdaw (Corvus monedula)

One (95-24) on 30 Jan. 1995, *Plaquemines*: Venice (ph). There is no pattern of vagrancy for the Gulf Coast for this European species. The locality, at the mouth of the Mississippi River, is exposed to considerable international shipping traffic and it seems more likely that this bird was ship-assisted rather than a natural vagrant. This record can be re-reviewed if a pattern of records develops that would indicate natural origin.

European Goldfinch (Carduelis carduelis)

One adult (93-62) on 25 Jan. 1994, Rapides: Alexandria (ph).

One adult (94-39) on 8 June 1994, Lafayette: Lafayette (ph).

European Goldfinch is a relatively common bird in the pet trade and the two records are more likely the result of escapes rather than vagrancy from Europe. No presently established US introduced populations (AOU 1998).

LBRC Review List

The LBRC requests information for the following species:

Red-throated Loon, Least Grebe, Red-necked Grebe, Western Grebe, Yellow-nosed Albatross, Cory's Shearwater, Greater Shearwater, Audubon's Shearwater, Wilson's Storm-Petrel, Leach's Storm-Petrel, Red-billed Tropicbird, Masked Booby, Brown Booby, Red-footed Booby, Tundra Swan, Trumpeter Swan, Brant, Eurasian Wigeon, Cinnamon Teal, White-winged Scoter, King Eider, Common Merganser, Masked Duck, Northern Goshawk, Harris's Hawk, White-tailed Hawk, Zone-tailed Hawk, Ferruginous Hawk, Rough-legged Hawk, Golden Eagle, Crested Caracara, Greater Prairie Chicken (extirpated), Black Rail, Whooping Crane (extirpated), Mongolian Plover, Eskimo Curlew, Black-tailed Godwit, Purple Sandpiper, Curlew Sandpiper, Ruff, Red-necked Phalarope, Red Phalarope, Parasitic Jaeger, Long-tailed Jaeger, Little Gull, California Gull, Thayer's Gull, Glaucous Gull, Great Black-backed Gull, Black-legged Kittiwake, Sabine's Gull, Arctic Tern, Brown Noddy, Ancient Murrelet, Band-tailed Pigeon, Flammulated Owl, Snowy Owl, Long-eared Owl, Northern Saw-whet Owl, Antillean Nighthawk, Lesser Nighthawk, Vaux's Swift, Broad-billed Hummingbird, Blue-throated Hummingbird, Anna's Hummingbird, Calliope Hummingbird, Broad-tailed Hummingbird, Allen's Hummingbird, Williamson's Sapsucker, Red-naped Sapsucker, Ivory-billed Woodpecker, Western Wood-Pewee, Willow Flycatcher, Hammond's Flycatcher, Pacific-slope Flycatcher, Cordilleran Flycatcher, Say's Phoebe, Brown-crested Flycatcher, Great Kiskadee, Sulphur-bellied Flycatcher, Tropical Kingbird,

Couch's Kingbird, Cassin's Kingbird, Gray Kingbird, Fork-tailed Flycatcher, Cave Swallow, Rock Wren, Northern Wheatear, Mountain Bluebird, White Wagtail, Varied Thrush, Sage Thrasher, Curve-billed Thrasher, Clark's Nutcracker, Bell's Vireo, Cassin's Vireo, Plumbeous Vireo, Black-whiskered Vireo, Bachman's Warbler, Virginia's Warbler, Lucy's Warbler, Tropical Parula, Townsend's Warbler, Black-throated Gray Warbler, Hermit Warbler, Connecticut Warbler, MacGillivray's Warbler, Painted Redstart, Red-faced Warbler, Western Tanager, Hepatic Tanager, Lazuli Bunting, Blue Bunting, Black-headed Grosbeak, Green-tailed Towhee, Spotted Towhee, American Tree Sparrow, Brewer's Sparrow, Lark Bunting, Golden-crowned Sparrow, McCown's Longspur, Smith's Longspur, Chestnut-collared Longspur, Bullock's Oriole, Hooded Oriole, Scott's Oriole, Shiny Cowbird, Red Crossbill, Evening Grosbeak, Lesser Goldfinch.

The LBRC requests information for the following recognizable subspecies or forms:

"Great White" Heron, Northern "Red-shafted" Flicker, and "Gray-headed" Junco.

The LBRC would like to receive documentation for any species not currently accepted on the State List. This includes species of captive/introduced origin not currently recognized on the State List. Notable examples are: Black Francolin, Ring-necked Pheasant, and Monk Parakeet. It is necessary to receive reports (especially those pertaining to breeding) to properly evaluate whether such species have become established. The Committee welcomes documentation for records of former Review List species that pre-date removal from the Review List. A number of additional species, formerly on the Review List, were not mentioned elsewhere in this report: Northern Gannet (removed 25 Apr. 1986), Black-bellied Whistling-Duck (removed on 31 Mar. 1990), White-tailed Kite (removed on 11 Mar. 1989), Buff-bellied Hummingbird (removed on 29 Apr. 1988), and Inca Dove (removed on 25 Apr. 1986).

Corrigendum

The following record in Dittmann (1995) had the wrong LBRC #: Glaucous Gull (89-90) should be (89-93). In the same report, the LBRC # (87-27) was not included for Brown-crested Flycatcher on 10-11 Oct. 1987.

Acknowledgments

The Committee would like to express their gratitude to all of the contributors listed throughout this report. The Committee would also like to thank the following individuals for additional documentation or commentary submitted to the LBRC: John Battalio, Ned A. Boyajian, Roger J. Breedlove, George O. and Nettie Broussard, Gary Byerly, Silas Cooper, Kermit Cummings, Chris Dorgan, Doris Falkenheiner, Gary R. Gaston, Paul Lehman, Curtis A. Marantz, Paul M. McKenzie, David P. Muth, B. Mac Myers III, Norton Nelkin, Nancy L. Newfield, Brent Ortego, David Pashley, Matt Pontiff, R. D. Purrington, J. V. Remsen, Jr., John P. Sevenair, Alfred E. and Gwen B. Smalley, Ronald J. Stein, Tommy Walker, Phillip A. Wallace, and Melvin Weber.

Michael A. Seymour provided technical assistance.

Peter H. Yaukey and J. V. Remsen, Jr. reviewed the manuscript and provided helpful comments.

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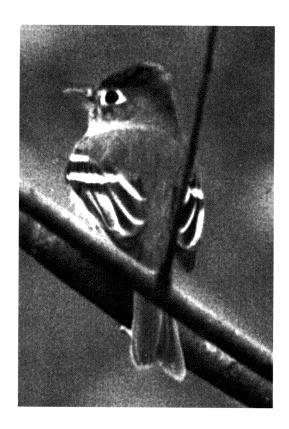
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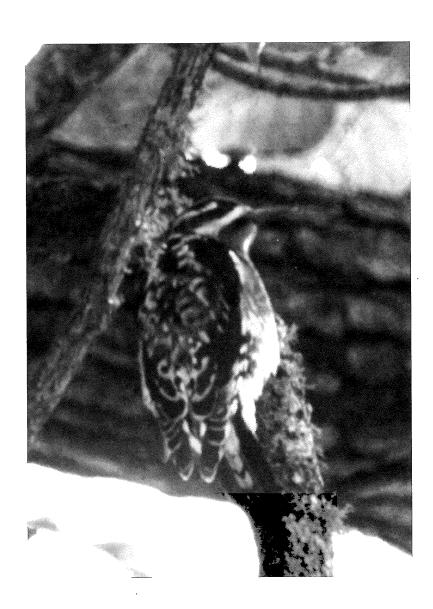
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Immature male Pacific-slope Flycatcher (94-57) near junction of LA Hwys. 35 and 342, Acadia Parish, Louisiana, 21-23 December 1994. Photograph by Dave Patton.



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