

Lists of victims and hosts of the parasitic cowbirds (*Molothrus*).

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Brood parasitism is an awkward term to describe an interaction between two species in which, as in predator-prey relationships, one species gains at the expense of the other. Brood parasites "prey" upon parental care. Victimized species usually have reduced breeding success, partly because of the additional cost of caring for alien eggs and young, and partly because of the behavior of brood parasites (both adults and young) which may directly and adversely affect the survival of the victim's own eggs or young. About 1% of all bird species are brood parasites which include of about 107 species found among five taxonomic groups: Black-headed Duck (*Heteronetta artricapilla*) of South America, the only waterfowl and the only precocial species completely brood parasitic; the honeyguides (family Indicatoridae) of Africa and southern Asia (of which all 17 species are known or thought to be brood parasitic); three lineages within the cuckoos (the 3 species of the American Neomorphinae, 4 species of *Clamator* among the Phaenicophaeinae, and all 57 species of Old World Cuculinae are known or thought to be brood parasitic), African finches of the family Viduidae comprising all 19 indigobirds (genus *Vidua*) and the Cuckoo-Finch (*Anomalospiza imberbis*); and the five cowbirds (genus *Molothrus*) of the New World Icteridae.

Host selection is an active process. Not all species co-occurring with brood parasites are equally likely to be selected nor are they of equal quality as hosts. Rather, to varying degrees, brood parasites are specialized for certain categories of hosts. Brood parasites may rely on a single host species to rear their young or may distribute their eggs among many species, seemingly without regard to any characteristics of potential hosts. Lists of species are not the best means to describe interactions between a brood parasitic species and its hosts. Such lists do not necessarily reflect the taxonomy used by the brood parasites themselves nor do they accurately reflect the complex interactions within bird communities (see Ortega 1998: 183-184). Host lists do, however, offer some insight into the process of host selection and do emphasize the wide variety of features than can impact on host selection. Of particular importance are those species known to have reared cowbird young, but even not all species within this category are of equal importance.

Criteria for host selection can be deduced only in a general sense from lists of victims, from some experiments (e.g., King 1979, White et al. 2007, White et al. 2009) and from field observations. Very little is known of those nests actually selected by individual female cowbirds but evidence is accumulating. Methods that have been used to investigate the laying patterns of individual Brown-headed Cowbirds *Molothrus ater* have been based (1) on assumptions that eggs with similar morphology were laid by the same female especially if all eggs were found within a limited area (e.g., Friedmann 1929, Jones 1941, McGeen and McGeen 1968, Walkinshaw 1949); (2) on electrophoretic markers of egg whites (Fleischer 1985); and (3) on mtDNA fingerprinting to identify genetic parents of eggs and young (e.g., Alderson et al. 1999a, 1999b, Hahn et al. 1999, Strausberger and Ashley 2005); this latter method has been applied similarly in examining host choice for Shiny Cowbirds *Molothrus bonariensis* (e.g., Mahler et al. 2007) and for Screaming Cowbirds *Molothrus rufoaxillaris* (e.g., Mahler et al. 2009).

Successful reproduction among brood parasites requires synchronizing egg laying with an appropriate host that will both (1) accept and incubate the interloping egg and (2) be able to rear the resultant young. Failure results when the potential host rejects the brood parasite's egg or if the potential host can neither properly incubate the parasitic egg nor provide proper care for the young. Failure results also when brood parasites cannot find an appropriate nest and lay their eggs instead on the ground or in nests of species best considered accidental hosts of no real biological significance (e.g., Blue-winged Teal *Spatula discors* as victim of Brown-headed Cowbird; see also Sealy 2015). For brood parasites, species victimized may be "good" if they can rear the parasitic young successfully or "bad" if they cannot. A three group categorization might identify (1) actual true host species, which are regularly parasitized (and perhaps actively selected) and usually able to rear parasitic young; (2) casual host species, including most victims (as defined below) and those species not regularly parasitized or only

infrequently able to rear parasitic young; and (3) accidental victims, which are only rarely parasitized and would be unable to rear parasitic young.

Any response, or lack thereof, by hosts to being parasitized (or to the brood parasites themselves) has potential impact on the reproductive success for both host and brood parasite. Such co-evolutionary interactions between brood parasite and host lead to adaptations and counter-adaptations. Among brood parasites, adaptations to this mode of reproduction include mimicry of host eggs and/or young, and specialized behaviors of adult or nestling brood parasites which may reduce or eliminate intranest competition. For host species, adaptations in response to brood parasitism may include ability to recognize brood parasites as threats (and to respond aggressively to nest searching brood parasites) or to reject parasitic eggs that appear in their nests in some way (by egg ejection, egg burying or nest abandonment).

McGeen (1972) introduced the concept of "cowbird pressure" as a measure of the impact brood parasitism may have on host species populations. McGeen's measure was determined as the mean of two values: incidence of parasitism (percent of nests parasitized) and intensity of parasitism (percent of parasitized nests that are multiply parasitized). Regardless of the best way to quantify "brood parasitism pressure", the concept has merit. These simple examples explain this concept: if 10% of nests of population A are parasitized and 20% of nests of population B, then population B has greater pressure; if 10% of nests of both populations A and B are parasitized, but population A receives 1 cowbird egg/nest and population B receives 2 cowbird eggs/nest, population B has greater cowbird pressure.

Size of host is likely another component of "pressure" since this characteristic will impact breeding success of both victim and brood parasite. Because brood parasites prey on parental care, small hosts likely exert more effort in food gathering and feeding per cowbird young than they would for any for their own young; hosts of similar size to cowbirds likely exert equal amounts of effort for both cowbird young and their own; and for hosts larger than cowbirds, hosts exert less care for cowbird young than for their own young. Size of host influences "pressure" also in affecting breeding success of host species as a result of the parasitism event itself (i.e., loss of eggs) and from intranest competition among cowbird and host nestlings (which often result in reduced host nestling survival among small hosts especially).

Amount of "pressure" borne by a host population is determined also by density of cowbird population, density of host population (as well as interactions with populations of other host species), timing of host breeding (in relation to cowbird breeding) and degree to which particular host species may be sought out or actively selected by nest searching cowbirds (due to any innate or imprinted preferences). High parasitism pressure in a population would indicate stronger selection for cowbird egg rejection by any means (such as nest desertion, egg ejection, or egg burial) as an co-evolutionary response by host species, but such response is acquired by host populations over an evolutionary time scale, not over the ecological time scale of the current breeding season.

Cowbird "pressure" is not a measure of how many cowbird young are reared but gives a measure, instead, of an impact on host species similar to measurements of predation rates. Different hosts have different abilities and attributes; host quality, in terms of successfully rearing cowbirds, is partly related to host size; larger hosts (e.g., Red-winged Blackbird *Agelaius phoeniceus*, Song Sparrow *Melospiza melodia*, Northern Cardinal *Cardinalis cardinalis*) being more capable than smaller hosts (e.g., Bell's Vireo *Vireo bellii*, Willow Flycatcher *Empidonax traillii*). As an example, Brown-headed Cowbird total numbers can be (crudely) estimated as about 30,000,000 individuals. The following two examples show extremes in "importance" of two relatively "good" hosts (= hosts that readily accept cowbird eggs and easily raise cowbird young). Kirtland's Warblers *Setophaga kirtlandii* number about 500 pairs; before cowbird control Kirtland's Warblers were under relatively high "pressure" -- about 75% parasitism rate and 1.5 cowbird eggs/nest; assuming 60% survival to fledging for cowbird eggs, Kirtland's Warblers could rear, at most, about 350 cowbird young. In contrast, Red-winged Blackbirds, perhaps the most abundant North American species comprising about 190,000,000 individuals, with a "low" rate of parasitism (5%) would fledge 16,000-times more cowbirds than would Kirtland's Warblers. (Friedmann [1963] noted 180 records of cowbird parasitism of Red-winged Blackbirds and 80 records of parasitism for Kirtland's Warbler, but in reality Red-winged Blackbirds are not 2-times more productive than Kirtland's Warblers; Friedmann's tabulations only generally indicate the importance of different host species, but the listing incorporates a variety of biases such as researcher's interest in host species, ease of study and accessibility.)

In the lists below, "**victim**" is defined simply as those species known to have received cowbird eggs in their nests (but have not necessarily reared cowbird young); and "**host**" (true host, effective host, biological host or fostering host; Johnsgard 1997) is defined as victims known to have reared cowbird young successfully. For Brown-headed Cowbird and Shiny Cowbird, with victim lists of over 200 species, many victims (unproven hosts) may prove to be true hosts as more observations and studies accumulate; victims can be easily identified as a result of a single visit to a nest containing cowbird egg(s) or young; identifying true hosts requires follow up visits to verify successful rearing of the cowbird young. Since occasionally (see Sealy and Lorenzana 1997) adults other than the host pair may feed out-of-nest cowbird young, observations only of "hosts" feeding cowbird young may not actually designate an effective host.

The basis for all of these lists is Friedmann and Kiff (1985). Species that have been recorded as hosts are indicated by an "x" in the "Host" column. In the column "Notes", "new" indicates additions to the basic lists provided by Friedmann and Kiff (1985); "host" in this column indicates former victims that can now be categorized as hosts; infrequent victims or hosts are coded by "single" or "few ", with "single" indicating just 1 known record and "few" indicating fewer than 10 records based primarily on number of records documented in Friedmann 1963, Friedmann et al. 1977, and Friedmann and Kiff 1985; "questionable" indicates those species having only circumstantial or doubtful evidence of parasitism.

Summary counts of victims and hosts of the brood parasitic cowbirds

Species	Total hosts and victims	Hosts
Screaming Cowbird <i>Molothrus rufoaxillaris</i>	5	5
Giant Cowbird <i>Molothrus oryzivorus</i>	16	13
Bronzed Cowbird <i>Molothrus aeneus</i>	105	48
Shiny Cowbird <i>Molothrus bonariensis</i>	299	123
Brown-headed Cowbird <i>Molothrus ater</i>	249	175

***Molothrus* Swainson, 1832**

Molothrus Swainson 1832, in *Fauna Boreali-Americana; or the Zoology of the northern parts of British America: containing descriptions of the objects of natural history collected by the late northern land expeditions under command of Captain Sir John Franklin, R.N. Part Second* ["1831"], *The Birds* [William Swainson and John Richardson], p. 277.

Type, by original designation, *Fringilla pecoris* Gmelin = *Oriolus ater* Boddaert

A. Hosts of the Screaming Cowbird – *Molothrus rufoaxillaris* Cassin 1866

Molothrus rufo-axillaris Cassin, 1866, *Proceedings of the Academy of Natural Sciences of Philadelphia*, 18, p. 23:

The Screaming Cowbird parasitizes, almost exclusively, the Grayish Baywing *Agelaioides badius*, but four other species have been found also to be hosts. Key references for this species are Friedmann (1963), Sick (1985, 1993), Fraga (1986, 1996, 1998), Mermoz and Reboreda (1996), de Mársico and Reboreda (2008), Mahler et al. (2009), de Mársico et al. (2010), and Mermoz et al. (2018). Several other species have been erroneously described as hosts of the Screaming Cowbird based on mis-identification of eggs of the Shiny Cowbird.¹ Mistakes in either host recognition or in nest selection by female Screaming Cowbirds have produced 2 additional species that can be regarded as accidental victims: Solitary Black Cacique *Cacicus solitarius* and Cattle Tyrant *Machetornis rixosus* (Di Giacomo et al. 2010).²

Host	FAMILY/species	Species	Notes
	ICTERIDAE		
x	Austral Blackbird	<i>Curaeus curaeus</i>	new
x	Scarlet-headed Blackbird	<i>Amblyramphus holosericeus</i>	new; single
x	Chopi Blackbird	<i>Gnorimopsar chopi</i>	new
x	Brown-and-Yellow Marshbird	<i>Pseudoleistes virescens</i>	new
x	Bay-winged Cowbird	<i>Agelaioides badius</i>	

B. Hosts of the Giant Cowbird – *Molothrus oryzivorus* (Gmelin 1788)

O[riolus] oryzivorus Gmelin, 1788, *Systema Naturae per Regna Tria Naturae, Secundum Classes, Ordines, Genera, Species, Cum Characteribus, Differentiis, Synonymis, Locis*, 1, pt. 1, p. 386:

List of known hosts of Giant Cowbird totals 11 species – mostly caciques and oropendolas – based on Friedmann (1963) with new data from Robinson 1988 (adding Russett-backed Oropendola *Psarocolius angustifrons*), Jaramillo and Burke 1999 (adding, or confirming, Green Oropendola *Psarocolius viridis*), McCrary and Gates 2007 (adding single records for each of the 2 *Icterus* orioles feeding out-of-nest cowbird young), Welford et al. 2007 (adding single record for Turquoise Jay *Cyanolyca turcosa*), Lehmann 1960 and Ramoni-Perazzi et al. 2010 (providing records for Green Jay *Cyanocorax yncas*) and Villa and Ruiz-Correa 2021 (adding several records for Red-bellied Grackle *Hypopyrrhus pyrohypogaster*). Other large species of icterids that are sympatric with Giant Cowbird may prove to be hosts with further study; potential “new” hosts include Black Oropendola *Psarocolius guatimozinus* (suggested by W. Meise in Schönwetter 1981), Casqued Oropendola *Clypicterus oseryi* (suggested by Jaramillo and Burke 1999), and Olive Oropendola *Psarocolius [bifasciatus] yuracares* (suggested by Fraga and Kreft 2007). W. Meise's prediction (in Schönwetter 1981) about Russet-backed Oropendola being a host proved correct (see Robinson 1988). Other new victims and hosts include Olive Oropendola *Psarocolius bifasciatus*, Dusky-green Oropendola *Psarocolius atrovirens* and [Southern] Mountain Cacique *Cacicus chrysnotus* (reported as victims; Marini et al. 2025), and Scrub Blackbird *Dives waczewiczi* reported as host (L. Khil, unpubl.)

Host	FAMILY/species	Species	Notes
	CORVIDAE		
x	Turquoise Jay	<i>Cyanolyca turcosa</i>	new; single
x	Green Jay	<i>Cyanocorax yncas</i>	few
	ICTERIDAE		
x	Russet-backed Oropendola	<i>Psarocolius angustifrons</i>	new
	Dusky-green Oropendola	<i>Psarocolius atrovirens</i>	new
x	Green Oropendola	<i>Psarocolius viridis</i>	new
x	Chestnut-headed Oropendola	<i>Psarocolius wagleri</i>	
x	Crested Oropendola	<i>Psarocolius decumanus</i>	
x	Montezuma Oropendola	<i>Psarocolius montezuma</i>	
	Olive Oropendola	<i>Psarocolius bifasciatus</i>	new
x	Yellow-rumped Cacique	<i>Cacicus cela</i>	
	Mountain Cacique	<i>Cacicus chrysnotus</i>	new
x	Red-rumped Cacique	<i>Cacicus haemorrhous</i>	
x	Spot-breasted Oriole	<i>Icterus pectoralis</i>	new; single
x	Streak-backed Oriole	<i>Icterus pustulatus</i>	new; single
x	Scrub Blackbird	<i>Dives waczewiczii</i>	new, single
x	Red bellied Grackle	<i>Hypopyrrhus pyrohypogaster</i>	new; few

C. Victims and hosts of the Bronzed Cowbird – *Molothrus aeneus* (Wagler 1829)

Ps[arocolius] aeneus Wagler, 1829, *Isis, oder Encyclopaedische Zeitung, von Oken*. 22. col. 758:

List of known victims and hosts of Bronzed Cowbird based on Friedmann and Kiff (1985; see also Lowther 1995³, Ortega 1998) with additions⁴.

Host	FAMILY/species	Species	Notes
	COLUMBIDAE		
	White-winged Dove	<i>Zenaida asiatica</i>	single
	Mourning Dove	<i>Zenaida macroura</i>	few
	Common Ground-Dove	<i>Columbina passerina</i>	few
	CUCULIDAE		
	Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	new; single
	TITYRIDAE		
	Rose-throated Becard	<i>Pachyramphus aglaiae</i>	
	TYRANNIDAE; TYRANNINAE		
	Willow Flycatcher	<i>Empidonax traillii</i>	new; single
	Social Flycatcher	<i>Myiozetetes similis</i>	new; single
	Great Kiskadee	<i>Pitangus sulphuratus</i>	single
	Sulphur-bellied Flycatcher	<i>Myiodynastes luteiventris</i>	single
x	Tropical Kingbird	<i>Tyrannus melancholicus</i>	
x	Couch's Kingbird	<i>Tyrannus couchii</i>	
x	Western Kingbird	<i>Tyrannus verticalis</i>	new
	Scissor-tailed Flycatcher	<i>Tyrannus forficatus</i>	single
	TYRANNIDAE; FLUVICOLINAE		
	Willow Flycatcher	<i>Empidonax traillii</i>	questionable
	Buff-breasted Flycatcher	<i>Empidonax fulvifrons</i>	questionable
	VIREONIDAE		
	Slaty Vireo	<i>Vireo brevipennis</i>	new; single
	Bell's Vireo	<i>Vireo bellii</i>	new; single

	Plumbeous Vireo	<i>Vireo plumbeus</i>	few
	Hutton's Vireo	<i>Vireo huttoni</i>	new; single
x	Western Warbling-Vireo	<i>Vireo swainsoni</i>	new; single
x	Yellow-green Vireo	<i>Vireo flavoviridis</i>	few
	CORVIDAE		
x	Green Jay	<i>Cyanocorax yncas</i>	
	POLIOPTILIDAE		
	Black-tailed Gnatcatcher	<i>Poliophtila melanura</i>	few
	White-lored Gnatcatcher	<i>Poliophtila albiloris</i>	
x	Blue-gray Gnatcatcher	<i>Poliophtila caerulea</i>	new; single
	TROGLODYTIDAE		
x	Bewick's Wren	<i>Thryomanes bewickii</i>	
x	Carolina Wren	<i>Thryothorus ludovicianus</i>	single
	Rufous-naped Wren	<i>Campylorhynchus rufinucha</i>	
x	Northern House Wren	<i>Troglodytes aedon</i>	new; single
	Happy Wren	<i>Pheugopedius felix</i>	single
x	Plain Wren	<i>Cantorchilus modestus</i>	single
	Sinaloa Wren	<i>Thryophilus sinaloa</i>	few
	Banded Wren	<i>Thryophilus pleurostictus</i>	single
	MIMIDAE		
x	Northern Mockingbird	<i>Mimus polyglottos</i>	
	Tropical Mockingbird	<i>Mimus gilvus</i>	
x	Long-billed Thrasher	<i>Toxostoma longirostre</i>	few
	Curve-billed Thrasher	<i>Toxostoma curvirostre</i>	
	LeConte's Thrasher	<i>Toxostoma lecontei</i>	single
	TURDIDAE		
	Black-billed Nightingale-Thrush	<i>Catharus gracilirostris</i>	
x	Orange-billed Nightingale-thrush	<i>Catharus aurantirostris</i>	
	Russet Nightingale-Thrush	<i>Catharus occidentalis</i>	
	Clay-colored Robin	<i>Turdus grayi</i>	few
	Rufous-backed Robin	<i>Turdus rufopalliatu</i>	
	FRINGILLIDAE		
	House Finch	<i>Haemorhous mexicanus</i>	new
	PASSERELLIDAE		
	Stripe-headed Sparrow	<i>Peucaea ruficauda</i>	single
	Black-chested Sparrow	<i>Peucaea humeralis</i>	single
x	Olive Sparrow	<i>Arremonops rufivirgatus</i>	
x	Black-striped Sparrow	<i>Arremonops conirostris</i>	new as host
x	Rufous-collared Sparrow	<i>Zonotrichia capensis</i>	single
	Lark Sparrow	<i>Chondestes grammacus</i>	
	Chipping Sparrow	<i>Spizella passerina</i>	new; single
x	Song Sparrow	<i>Melospiza melodia</i>	
	Rusty-crowned Ground-Sparrow	<i>Melozona kieneri</i>	
x	Canyon Towhee	<i>Melozona fusca</i>	
	White-throated Towhee	<i>Melozona albicollis</i>	
x	Prevost's Ground-Sparrow	<i>Melozona biarcuata</i>	few
x	White-eared Ground-Sparrow	<i>Melozona leucotis</i>	single
x	Rusty Sparrow	<i>Aimophila rufescens</i>	new as host; 1
	Rufous-crowned Sparrow	<i>Aimophila ruficeps</i>	questionable
x	Spotted Towhee	<i>Pipilo maculatus</i>	few
x	White-naped Brushfinch	<i>Atlapetes albinucha</i>	
	ICTERIIDAE		

x	Yellow-breasted Chat	<i>Icteria virens</i>	few
	ICTERIDAE		
	Yellow-billed Cacique	<i>Amblycercus holosericeus</i>	few
	Yellow-winged Cacique	<i>Cacicus melanicterus</i>	
	Chestnut-headed Oropendola	<i>Psarocolius wagleri</i>	single
	Great-tailed Grackle	<i>Quiscalus mexicanus</i>	new; single
	Black-vented Oriole	<i>Icterus wagleri</i>	few
x	Orchard Oriole	<i>Icterus spurius</i>	few
	Fuertes's Oriole	<i>Icterus fuertesi</i>	single
x	Hooded Oriole	<i>Icterus cucullatus</i>	
	Streak-backed Oriole	<i>Icterus pustulatus</i>	
x	Spot-breasted Oriole	<i>Icterus pectoralis</i>	new; few
x	Altamira Oriole	<i>Icterus gularis</i>	new; few
x	Audubon's Oriole	<i>Icterus graduacauda</i>	
x	Bullock's Oriole	<i>Icterus bullockii</i>	
x	Scott's Oriole	<i>Icterus parisorum</i>	new; few
x	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	
	PARULIDAE		
	Lucy's Warbler	<i>Oreothlypis luciae</i>	new; single
x	Olive-crowned Yellowthroat	<i>Geothlypis semiflava</i>	new; single
x	Gray-crowned Yellowthroat	<i>Geothlypis poliocephala</i>	new; single
x	Tropical Parula	<i>Setophaga pitaiayumi</i>	single
	Yellow Warbler	<i>Setophaga aestiva</i>	new; single
	Mangrove Warbler	<i>Setophaga erithachorides</i>	new
x	Golden-cheeked Warbler	<i>Setophaga chrysoparia</i>	single
x	Rufous-capped Warbler	<i>Basileuterus rufifrons</i>	new; few
x	Golden-crowned Warbler	<i>Basileuterus culicivorus</i>	new; single
	Painted Redstart	<i>Myioborus pictus</i>	single
	CARDINALIDAE		
	Hepatic Tanager	<i>Piranga flava</i>	few
x	Summer Tanager	<i>Piranga rubra</i>	
	Western Tanager	<i>Piranga ludoviciana</i>	new; few
x	Flame-colored Tanager	<i>Piranga bidentata</i>	few
x	Red-headed Tanager	<i>Piranga erythrocephala</i>	single
x	Red-crowned Ant-Tanager	<i>Habia rubica</i>	single
	Red-throated Ant-Tanager	<i>Habia fuscicauda</i>	single
x	Common Bush-Tanager	<i>Chlorospingus ophthalmicus</i>	new; single
	White-lined Tanager	<i>Tachyphonus rufus</i>	new; single
	Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>	single
x	Northern Cardinal	<i>Cardinalis cardinalis</i>	
x	Pyrrhuloxia	<i>Cardinalis sinuatus</i>	new; few
	Blue Seed eater	<i>Amaurospiza concolor</i>	single
	Blue Grosbeak	<i>Passerina caerulea</i>	few
	Painted Bunting	<i>Passerina ciris</i>	few
	THRAUPIDAE		
x	Cherrie's Tanager	<i>Ramphocelus costaricensis</i>	
	Buff-throated Saltator	<i>Saltator maximus</i>	new; single
	White-collared Seed eater	<i>Sporophila torqueola</i>	single

D. Victims and hosts of the Shiny Cowbird – *Molothrus bonariensis* (Gmelin 1789)

Tanagra bonariensis Gmelin, 1789, *Systema Naturae per Regna Tria Naturae, Secundum Classes, Ordines, Genera, Species, cum Characteribus, Differentiis, Synonymis, Locis*, 1, pt. 2, p. 898:

List of known victims and hosts of Shiny Cowbird based primarily on the list in Friedmann and Kiff (1985) and incorporating 2 necessary deletions (see Fraga 2002⁵) and several additions⁶. See also Ortega (1998), Lowther and Post (1999), Salvador (2012), and Salvador and Bodrati (2014).

Little published information from Cuba on known hosts. Besides published observation of Black-whiskered Vireo *Vireo altiloquus* feeding cowbird fledgling 9 Jun 1994 (Llanes Sosa and Hernández de Armas 1995), Orlando H. Garrido (pers. comm., 19 Jun 1998) knew of only 2 species as hosts in Cuba (based on 3 observations of hosts feeding cowbird young) – Tawny-shouldered Blackbird *Agelaius humeralis* and Cuban Oriole *Icterus melanopsis* (see also Cruz et al. 1998). In addition, Cruz et al. (1989) predicted the following species (most are not included in the following list) would be found to be hosts of the Shiny Cowbird in Cuba – Cuban Vireo *Vireo gundlachi*, Zapata Wren *Ferminia cerverai*, Olive-capped Warbler *Setophaga pityophila*, Yellow-headed Warbler *Teretistris fernandinae*, Oriente Warbler *Teretistris fornsi*, Zapata Sparrow *Torreornis inexpectata*, Eastern Meadowlark *Sturnella magna*, Tawny-shouldered Blackbird *Agelaius humeralis*, Red-shouldered Blackbird *Agelaius assimilis*, and Cuban Blackbird *Dives atrovioleaceus* – and the following species predicted as hosts elsewhere in the West Indies (e.g., Jamaica) – Thick-billed Vireo *Vireo crassirostris*, Jamaican White-eyed Vireo *Vireo modestus*, and Jamaican Oriole *Icterus leucopteryx*. (Expected host status was proved correct for Jamaican Oriole, see Raffaele et al. 1998).

No definite record of parasitism by this species is known yet for Florida, but Red-winged Blackbird *Agelaius phoeniceus* has been claimed to have been a Shiny Cowbird host and 3 other species (Prairie Warbler *Setophaga discolor*, Black-whiskered Vireo *Vireo altiloquus* and Northern Cardinal *Cardinalis cardinalis*) are known to have served as cowbird hosts within the Florida range of Brown-headed and Shiny Cowbirds (Paul 1989, Stevenson and Anderson 1994, Cruz et al. 1998, Cruz et al. 2000). Cruz et al. (1998; see also Cruz et al. 2000) provides evaluations of possible new host species for the Shiny Cowbird in Florida and discuss impact of parasitism on these species. Specimen taken in Georgia provides first evidence for breeding of this species in the southeastern U.S. (Sykes and Post 2001⁷; see also Smith and Sprunt 1987, Post 1992, Pranty 1995, 2000).

Host	FAMILY/species	Species	Notes
	COLUMBIDAE		
	Picui Ground-Dove	<i>Columbina picui</i>	few
	Black-winged Ground-Dove	<i>Metriopelia melanoptera</i>	
	Zenaida Dove	<i>Zenaida aurita</i>	new; single
	Eared Dove	<i>Zenaida auriculata</i>	
	West Peruvian Dove	<i>Zenaida meloda</i>	new; single
	Common Ground-Dove	<i>Columbina passerina</i>	new; single
	CUCULIDAE		
	Dark-billed Cuckoo	<i>Coccyzus melacoryphus</i>	new
	Guira Cuckoo	<i>Guira guira</i>	new
	PICIDAE		
	Green-barred Woodpecker	<i>Colaptes melanochloros</i>	single
	Campo Flicker	<i>Colaptes campestris</i>	new
	FURNARIIDAE; FURNARIINAE		
	Scimitar-billed Woodcreeper	<i>Drymornis bridgesii</i>	new
x	Chaco Earthcreeper	<i>Tarphonomus certhioides</i>	new
	Olog's Cinclodes	<i>Cinclodes ologi</i>	questionable
	White-winged Cinclodes	<i>Cinclodes atacamensis</i>	questionable
x	Rufous Hornero	<i>Furnarius rufus</i>	
	Crested Hornero	<i>Furnarius cristatus</i>	
	Curve-billed Reedhaunter	<i>Limnornis curvirostris</i>	single
	Straight-billed Reedhaunter	<i>Limnornis rectirostris</i>	new

	Wren-like Rushbird	<i>Phleocryptes melanops</i>	single
	Tufted Tit-Spinetail	<i>Leptasthenura platensis</i>	
	Plain-mantled Tit-Spinetail	<i>Leptasthenura aegithaloides</i>	
	Chotoy Spinetail	<i>Schoeniophylax phryganophilus</i>	new
	Sooty-fronted Spinetail	<i>Synallaxis frontalis</i>	new
x	Pale-breasted Spinetail	<i>Synallaxis albescens</i>	
	Spix's Spinetail	<i>Synallaxis spixi</i>	
	Stripe-crowned Spinetail	<i>Cranioleuca pyrrhophia</i>	few
x	Olive Spinetail	<i>Cranioleuca obsoleta</i>	single
	Rusty-backed Spinetail	<i>Cranioleuca vulpina</i>	single
	Sulphur-bearded Spinetail	<i>Cranioleuca sulphurifera</i>	new
	Yellow-chinned Spinetail	<i>Certhiaxis cinnamomeus</i>	
	Sharp-billed Canastero	<i>Asthenes pyrrholeuca</i>	new
x	Short-billed Canastero	<i>Asthenes baeri</i>	
	Creamy-breasted Canastero	<i>Asthenes dorbignyi</i>	single
	Patagonian Canastero	<i>Asthenes patagonica</i>	few
	Puna Canastero	<i>Asthenes sclateri</i>	single
	Hudson's Canastero	<i>Asthenes hudsoni</i>	
x	Cipó Canastero	<i>Asthenes luizae</i>	new
	Rufous-fronted Thornbird	<i>Phacellodomus rufifrons</i>	single
	Little Thornbird	<i>Phacellodomus sibilatrix</i>	single
	Streak-fronted Thornbird	<i>Phacellodomus striaticeps</i>	single
x	Orange-breasted Thornbird	<i>Phacellodomus ferrugineigula</i>	new
x	Freckle-breasted Thornbird	<i>Phacellodomus striaticollis</i>	few
	Greater Thornbird	<i>Phacellodomus ruber</i>	few
x	Firewood-Gatherer	<i>Anumbius annumbi</i>	
x	Lark-like Brushrunner	<i>Coryphistera alaudina</i>	single
	Caatinga Cacholote	<i>Pseudoseisura cristata</i>	
	White-throated Cacholote	<i>Pseudoseisura gutturalis</i>	single
	Brown Cacholote	<i>Pseudoseisura lophotes</i>	new
	FURNARIIDAE; DENDROCOLAPTINAE		
	Straight-billed Woodcreeper	<i>Dendroplex picus</i>	
	COTINGIDAE		
	White-tipped Plantcutter	<i>Phytotoma rutila</i>	few
	TITYRIDAE		
x	Black-tailed Tityra	<i>Tityra cayana</i>	single
	White-naped Xenopsaris	<i>Xenopsaris albinucha</i>	
	White-winged Becard	<i>Pachyramphus polychopterus</i>	
	TYRANNIDAE		
	Yellow-bellied Elaenia	<i>Elaenia flavogaster</i>	
	Large Elaenia	<i>Elaenia spectabilis</i>	new
x	White-crested Elaenia	<i>Elaenia albiceps</i>	new as host
x	Small-billed Elaenia	<i>Elaenia parvirostris</i>	new
x	Caribbean Elaenia	<i>Elaenia martinica</i>	new
	Suiriri Flycatcher	<i>Suiriri suiriri</i>	few
	Greater Wagtail-Tyrant	<i>Stigmatura budytoides</i>	new
	Southern Scrub-Flycatcher	<i>Sublegatus modestus</i>	new
	Many-colored Rush Tyrant	<i>Tachuris subrigostris</i>	new
	Yellow-olive Flatbill	<i>Tolmomyias sulphurescens</i>	new
	White-crested Tyrannulet	<i>Serpophaga subcristata</i>	single
	Sooty Tyrannulet	<i>Serpophaga nigricans</i>	
x	Warbling Doradito	<i>Pseudocolopteryx flaviventris</i>	

	Flavescent Flycatcher	<i>Myiophobus fasciatus</i>	
	Cliff Flycatcher	<i>Hirundinea ferruginea</i>	new; single
	Vermilion Flycatcher	<i>Pyrocephalus rubinus</i>	
	Rufous-naped Ground-Tyrant	<i>Muscisaxicola rufivertex</i>	new
	Grey-bellied Shrike-Tyrant	<i>Agriornis microptera</i>	new
	Grey Monjita	<i>Xolmis cinereus</i>	
	White Monjita	<i>Xolmis irupero</i>	
x	Fire-eyed Diucon	<i>Xolmis pyrope</i>	new as host
	Black-and-White Monjita	<i>Xolmis dominicanus</i>	new
x	Short-tailed Field-Tyrant	<i>Muscigralla brevicauda</i>	single
	Blue-billed Black-Tyrant	<i>Knipolegus cyanirostris</i>	
	Plumbeous Andean-Tyrant	<i>Knipolegus cabanisi</i>	
x	Velvety Black-Tyrant	<i>Knipolegus nigerrimus</i>	new; few
x	Spectacled Tyrant	<i>Hymenops perspicillata</i>	
x	Masked Water-Tyrant	<i>Fluvicola nengeta</i>	new
x	Pied Water-Tyrant	<i>Fluvicola pica</i>	new; few
x	Black-backed Water-Tyrant	<i>Fluvicola albiventer</i>	new; few
x	White-headed Marsh-Tyrant	<i>Arundinicola leucocephala</i>	
x	Yellow-browed Tyrant	<i>Satrapa icterophrys</i>	
x	Cattle Tyrant	<i>Machetornis rixosa</i>	
	Short-crested Flycatcher	<i>Myiarchus ferox</i>	single
x	Swainson's Flycatcher	<i>Myiarchus swainsoni</i>	new
	Brown-crested Flycatcher	<i>Myiarchus tyrannulus</i>	few
x	Puerto Rico Flycatcher	<i>Myiarchus antillarum</i>	new
	Lesser Antillean Flycatcher	<i>Myiarchus oberi</i>	new
x	Streaked Flycatcher	<i>Myiodynastes maculatus</i>	
	Baird's Flycatcher	<i>Myiodynastes bairdii</i>	few
x	White-bearded Flycatcher	<i>Phelpsia [Conopias] inornatus</i>	
x	Great Kiskadee	<i>Pitangus sulphuratus</i>	
	Piratic Flycatcher	<i>Legatus leucophais</i>	possible
	Boat-billed Flycatcher	<i>Megarynchus pitangua</i>	new
x	Crowned Slaty-Flycatcher	<i>Empidonomus aurantioatrocristatus</i>	few
	Variegated Flycatcher	<i>Empidonomus varius</i>	
x	Tropical Kingbird	<i>Tyrannus melancholicus</i>	
	Snowy-throated Kingbird	<i>Tyrannus niveigularis</i>	single
	Gray Kingbird	<i>Tyrannus dominicensis</i>	single
x	Fork-tailed Flycatcher	<i>Tyrannus savana</i>	
	THAMNOPHILIDAE		
x	Great Antshrike	<i>Taraba major</i>	
x	Collared Antshrike	<i>Thamnophilus bernardi</i>	
	Barred Antshrike	<i>Thamnophilus doliatus</i>	new
	Rufous-capped Antshrike	<i>Thamnophilus ruficapillus</i>	
	Variable Antshrike	<i>Thamnophilus caerulescens</i>	new
	RHINOCRYPTIDAE		
	Crested Gallito	<i>Rhinocrypta lanceolata</i>	
	VIREONIDAE		
x	Rufous-browed Peppershrike	<i>Cyclarhis gujanensis</i>	few
x	Puerto Rican Vireo	<i>Vireo latimeri</i>	new
	Red-eyed Vireo	<i>Vireo olivaceus</i>	
	Chivi Vireo	<i>Vireo chici</i>	
x	Black-whiskered Vireo	<i>Vireo altiloquus</i>	new
	Rufous-crowned Greenlet	<i>Hylophilus poicilotis</i>	single

	Golden-fronted Greenlet	<i>Hylophilus aurantiifrons</i>	
	HIRUNDINIDAE		
x	White-rumped Swallow	<i>Tachycineta leucorrhoa</i>	few
x	Barn Swallow	<i>Hirundo rustica</i>	new
x	Brown-chested Martin	<i>Phaeoprogne tapera</i>	few
	DULIDAE		
x	Palm Chat	<i>Dulus dominicus</i>	new
	POLIOPTILIDAE		
x	Masked Gnatcatcher	<i>Polioptila dumicola</i>	
	TROGLODYTIDAE		
x	Bicolored Wren	<i>Campylorhynchus griseus</i>	
x	Thrush-like Wren	<i>Campylorhynchus turdinus</i>	
	Fasciated Wren	<i>Campylorhynchus fasciatus</i>	
x	Stripe-backed Wren	<i>Campylorhynchus nuchalis</i>	single
x	Apolinar's Wren	<i>Cistothorus apolinari</i>	new
x	Northern House Wren	<i>Troglodytes aedon</i>	
x	Southern House Wren	<i>Troglodytes musculus</i>	new
x	Rufous-breasted Wren	<i>Pheugopedius rutilus</i>	
	Buff-breasted Wren	<i>Cantorchilus leucotis</i>	
x	Superciliated Wren	<i>Cantorchilus superciliaris</i>	
	MIMIDAE		
	Northern Mockingbird	<i>Mimus polyglottos</i>	new
x	Tropical Mockingbird	<i>Mimus gilvus</i>	
x	Chilean Mockingbird	<i>Mimus thenca</i>	new as host
x	Long-tailed Mockingbird	<i>Mimus longicaudatus</i>	
x	Chalk-browed Mockingbird	<i>Mimus saturninus</i>	
x	Patagonian Mockingbird	<i>Mimus patagonicus</i>	few
x	White-banded Mockingbird	<i>Mimus triurus</i>	
x	Brown-backed Mockingbird	<i>Mimus dorsalis</i>	new
	TURDIDAE		
	Orange-billed Nightingale-Thrush	<i>Catharus aurantirostris</i>	
	Black-billed Thrush	<i>Turdus ignobilis</i>	new
x	Chiguanco Thrush	<i>Turdus chiguanco</i>	
	Glossy-black Thrush	<i>Turdus serranus</i>	single
	Andean Slaty-Thrush	<i>Turdus nigriceps</i>	
	Austral Thrush	<i>Turdus falcklandii</i>	
x	Rufous-bellied Thrush	<i>Turdus rufiventris</i>	
x	Pale-breasted Thrush	<i>Turdus leucomelas</i>	new as host
x	Creamy-bellied Thrush	<i>Turdus amaurochalinus</i>	
	Bare-eyed Thrush	<i>Turdus nudigenis</i>	
	Red-legged Thrush	<i>Turdus plumbeus</i>	new
	Austral Thrush	<i>Turdus falcklandii</i>	new
	PLOCEIDAE		
x	Village Weaver	<i>Ploceus cucullatus</i>	new
	ESTRILDIDAE		
	Bronze Mannikin	<i>Lonchura cucullata</i>	single
	Nutmeg Mannikin	<i>Lonchura punctulata</i>	new; single
	PASSERIDAE		
x	House Sparrow	<i>Passer domesticus</i>	
	MONTACILLIDAE		
	Short-billed Pipit	<i>Anthus furcatus</i>	few
x	Yellowish Pipit	<i>Anthus lutescens</i>	

	Correndera Pipit	<i>Anthus correndera</i>	
	Peruvian Pipit	<i>Anthus peruvianus</i>	new
	FRINGILLIDAE		
x	Hooded Siskin	<i>Spinus magellanicus</i>	few
	Black-chinned Siskin	<i>Spinus barbata</i>	
	RHODINOCICHLIDAE		
	Rosy Thrush-Tanager	<i>Rhodinocichla rosea</i>	single
	PASSERELLIDAE		
x	Tumbes Sparrow	<i>Rhynchospiza stolzmanni</i>	
	Stripe-capped Sparrow	<i>Rhynchospiza strigiceps</i>	single
	Grassland Sparrow	<i>Ammodramus [Myiospiza] humeralis</i>	
	Black-striped Sparrow	<i>Arremonops conirostris</i>	single
	Saffron-billed Sparrow	<i>Arremon flavirostris</i>	single
	Black-capped Sparrow	<i>Arremon abeillei</i>	new; single
x	Grey-browed Brushfinch	<i>Arremon assimilis</i>	new; few
x	Rufous-collared Sparrow	<i>Zonotrichia capensis</i>	
x	Ochre-breasted Brushfinch	<i>Atlapetes semirufus</i>	few
x	White-naped Brushfinch	<i>Atlapetes albinucha</i>	new
	Yellow-striped Brushfinch	<i>Atlapetes citrinellus</i>	
x	Pale-headed Brushfinch	<i>Atlapetes pallidiceps</i>	new
	ICTERIDAE		
	Yellow-rumped Cacique	<i>Cacicus cela</i>	single
x	Golden-winged Cacique	<i>Cacicus chrysopterus</i>	new as host; few
	Solitary Cacique	<i>Cacicus solitarius</i>	questionable
x	Yellow-billed Cacique	<i>Amblyramphus holosericeus</i>	
	Bahama Oriole	<i>Icterus northropi</i>	new
x	Cuban Oriole	<i>Icterus melanopsis</i>	new
	Hispaniolan Oriole	<i>Icterus dominicensis</i>	new; single
x	Puerto Rican Oriole	<i>Icterus portoricensis</i>	new
x	St. Lucia Oriole	<i>Icterus laudabilis</i>	new
	Martinique Oriole	<i>Icterus bonana</i>	
x	Yellow-tailed Oriole	<i>Icterus mesomelas</i>	new; single
	Epaulet Oriole	<i>Icterus cayanensis</i>	single
	Moriche Oriole	<i>Icterus chryscephalus</i>	
x	Variable Oriole	<i>Icterus pyrrhopterus</i>	new
	Yellow-backed Oriole	<i>Icterus chrysater</i>	
x	Venezuelan Troupial	<i>Icterus [icterus] icterus</i>	new as host
	Campo Troupial	<i>Icterus [icterus] jamacaii</i>	
	Orange-backed Troupial	<i>Icterus [icterus] croconotus</i>	
x	Yellow Oriole	<i>Icterus nigrogularis</i>	new as host
	Jamaican Oriole	<i>Icterus leucopteryx</i>	new
x	White-edged Oriole	<i>Icterus graceannae</i>	
	Orange-crowned Oriole	<i>Icterus auricapillus</i>	new
	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	questionable
	Tawny-shouldered Blackbird	<i>Agelaius humeralis</i>	new
x	Yellow-shouldered Blackbird	<i>Agelaius xanthomus</i>	
x	Scrub Blackbird	<i>Dives warszewiczi</i>	
	Golden-tufted Grackle	<i>Macroagelaius imthurni</i>	
	Oriole Blackbird	<i>Gymnomystax mexicanus</i>	few
x	Chopi Blackbird	<i>Gnorimopsar chopi</i>	new as host
x	Forbes's Blackbird	<i>Anumara forbesi</i>	new
x	Yellow-winged Blackbird	<i>Agelasticus thilius</i>	

x	Unicolored Blackbird	<i>Agelasticus cyanopus</i>	few
x	Greater Antillean Grackle	<i>Quiscalus niger</i>	new; few
x	Carib Grackle	<i>Quiscalus lugubris</i>	
x	Chestnut-capped Blackbird	<i>Chrysomus ruficapillus</i>	
x	Yellow-hooded Blackbird	<i>Chrysomus icterocephalus</i>	new
x	Saffron-cowled Blackbird	<i>Xanthopsar flavus</i>	new as host
x	Brown-and-Yellow Marshbird	<i>Pseudoleistes virescens</i>	new as host
	Yellow-rumped Marshbird	<i>Pseudoleistes guirahuro</i>	questionable
x	Grayish Baywing	<i>Agelaioides badius</i>	new
x	Pale Baywing	<i>Agelaioides fringillarius</i>	new
	Pampas Meadowlark	<i>Sturnella [Pezites] defilippii</i>	few
x	Long-tailed Meadowlark	<i>Sturnella [Pezites] loyca</i>	new as host
x	Red-breasted Meadowlark	<i>Sturnella [Leistes] militaris</i>	
	Peruvian Meadowlark	<i>Sturnella [Leistes] bellicosa</i>	new; few
x	White-browed Meadowlark	<i>Sturnella [Leistes] supercilialis</i>	new
PARULIDAE			
x	Golden Warbler	<i>Setophaga petechia</i>	
	Adelaide's Warbler	<i>Setophaga adelaidae</i>	new
x	Masked Yellowthroat	<i>Geothlypis aequinoctialis</i>	
	Golden-crowned Warbler	<i>Basileuterus culicivorus</i>	new
	Flavescent Warbler	<i>Basileuterus flaveolus</i>	
	White-striped Warbler	<i>Basileuterus leucophrys</i>	
CARDINALIDAE			
	Hepatic Tanager	<i>Piranga flava</i>	
	Yellow Grosbeak	<i>Pheucticus chrysopheplus</i>	few
x	Golden Grosbeak	<i>Pheucticus chrysogaster</i>	new; few
	Black-backed Grosbeak	<i>Pheucticus aureoventris</i>	
	Ultramarine Grosbeak	<i>Cyanocompsa brissonii</i>	
THRAUPIDAE			
	Hooded Tanager	<i>Nemosia pileata</i>	new
	Black-and-white Tanager	<i>Conothraupis speculigera</i>	new
x	Guira Tanager	<i>Hemithraupis guira</i>	new; few
x	Bicolored Conebill	<i>Conirostrum bicolor</i>	few
	Cinereous Conebill	<i>Conirostrum cinereum</i>	few
	Greater Yellow-Finch	<i>Sicalis auriventris</i>	
	Saffron Finch	<i>Sicalis flaveola</i>	
	Grassland Yellow-Finch	<i>Sicalis luteola</i>	
	Black-hooded Sierra-Finch	<i>Phrygilus atriceps</i>	new
	Patagonian Sierra-Finch	<i>Phrygilus patagonicus</i>	
	Plumbeous Sierra-Finch	<i>Phrygilus unicolor</i>	
	Ash-breasted Sierra-Finch	<i>Phrygilus plebejus</i>	new
	Band-tailed Seedeater	<i>Catamenia analis</i>	new
	Ruby-crowned Tanager	<i>Tachyphonus coronatus</i>	new
	White-lined Tanager	<i>Tachyphonus rufus</i>	few
	Pileated Finch	<i>Coryphospingus pileatus</i>	
x	Red-crested Finch	<i>Coryphospingus cucullatus</i>	new as host
	Crimson-backed Tanager	<i>Ramphocelus dimidiatus</i>	new
x	Silver-beaked Tanager	<i>Ramphocelus carbo</i>	few
x	Brazilian Tanager	<i>Ramphocelus bresilius</i>	
	Crimson-breasted Finch	<i>Rhodospingus cruentus</i>	
	Blue Dacnis	<i>Dacnis cayana</i>	single
	Blue-black Grassquit	<i>Volatinia jacarina</i>	new

	Lined Seedeater	<i>Sporophila lineola</i>	few
x	Double-collared Finch	<i>Sporophila caerulescens</i>	
	Ruddy-breasted Seedeater	<i>Sporophila minuta</i>	
	Lesser Seed-Finch	<i>Sporophila angolensis</i>	
	Large-billed Seed-Finch	<i>Sporophila crassirostris</i>	
	Many-colored Chaco-Finch	<i>Saltatricula multicolor</i>	
x	Streaked Saltator	<i>Saltator albicollis</i>	single
x	Grayish Saltator	<i>Saltator coerulescens</i>	
	Green-winged Saltator	<i>Saltator similis</i>	
x	Golden-billed Saltator	<i>Saltator aurantirostris</i>	
	Black-throated Grosbeak	<i>Saltator fuliginosus</i>	
x	Great Pampa-Finch	<i>Embernagra platensis</i>	
x	Pale-throated Pampa-Finch	<i>Embernagra longicauda</i>	new; single
	Wedge-tailed Grass-Finch	<i>Emberizoides herbicola</i>	
x	Cinereous Finch	<i>Piezorina cinerea</i>	
	Collared Warbling-Finch	<i>Poospiza hispaniolensis</i>	few
x	Black-and-Rufous Warbling-Finch	<i>Poospiza nigrorufa</i>	few
	Black-and-chestnut Warbling-Finch	<i>Poospiza whitii</i>	new
	Gray-throated Warbling-Finch	<i>Poospiza cabanisi</i>	few
	Orange-headed Tanager	<i>Thlypopsis sordida</i>	few
x	Fulvous-headed Tanager	<i>Thlypopsis fulviceps</i>	new; few
	Ringed Warbling-Finch	<i>Microspingus torquatus</i>	few
x	Black-capped Warbling-Finch	<i>Microspingus melanoleuca</i>	new; few
	Cinereous Warbling-Finch	<i>Microspingus cinerea</i>	few
x	White-rumped Tanager	<i>Cypsnagra hirundinacea</i>	new
x	Long-tailed Reed-Finch	<i>Donacospiza albifrons</i>	
	Black-faced Grassquit	<i>Tiaris bicolor</i>	new
	Puerto Rican Bullfinch	<i>Loxigilla portoricensis</i>	new
	Lesser Antillean Bullfinch	<i>Loxigilla noctis</i>	few
	Barbados Bullfinch	<i>Loxigilla barbadensis</i>	new
x	White-banded Tanager	<i>Neothraupis fasciata</i>	new
x	Common Diuca-Finch	<i>Diuca diuca</i>	
	Yellow Cardinal	<i>Gubernatrix cristata</i>	
	Red-crested Cardinal	<i>Paroaria coronata</i>	
	Red-capped Cardinal	<i>Paroaria gularis</i>	
	Yellow-billed Cardinal	<i>Paroaria capitata</i>	
	Red-cowled Cardinal	<i>Paroaria dominicana</i>	new
	Black-faced Tanager	<i>Schistochlamys melanopis</i>	single
	Scrub Tanager	<i>Stilpnia vitriolina</i>	new
	Blue-gray Tanager	<i>Thraupis episcopus</i>	
x	Sayaca Tanager	<i>Thraupis sayaca</i>	few
	Golden-chevroned Tanager	<i>Thraupis ornata</i>	
x	Palm Tanager	<i>Thraupis palmarum</i>	new; few
x	Blue-and-Yellow Tanager	<i>Rauenia bonariensis</i>	

E. Victims and hosts of the Brown-headed Cowbird – *Molothrus ater* (Boddaert 1783)

Oriolus ater Boddaert, 1783, *Table des Planches Enluminées* [sic] *d'Histoire Naturelle de M. D'Aubenton* [sic], p. 37:

List of known victims and hosts of Brown-headed Cowbird based on Friedmann and Kiff (1985) with additions ⁸ and potential deletions ⁹.

Host	FAMILY/species	Species	Notes
	ANATIDAE		
	Blue-winged Teal	<i>Spatula discors</i>	single
	Lesser Scaup	<i>Aythya affinis</i>	single
	Hooded Merganser	<i>Lophodytes cucullatus</i>	new; single
	PHASIANIDAE; PHASIANINAE		
	Ring-necked Pheasant	<i>Phasianus colchicus</i>	new; single
	PHASIANIDAE; TETRAONINAE		
	Greater Prairie-Chicken	<i>Tympanuchus cupido</i>	new; single
	COLUMBIDAE		
	Mourning Dove	<i>Zenaida macroura</i>	few; dubious as host
	Common Ground-Dove	<i>Columbina passerina</i>	few
	CUCULIDAE		
	Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	few
	Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	few
	TROCHILIDAE		
	Ruby-throated Hummingbird	<i>Archilochus colubris</i>	single
	RALLIDAE		
	Virginia Rail	<i>Rallus limicola</i>	single
	CHARADRIIDAE		
	Killdeer	<i>Charadrius vociferus</i>	single
	SCOLOPACIDAE		
	Spotted Sandpiper	<i>Actitis macularia</i>	few
	Upland Sandpiper	<i>Bartramia longicauda</i>	few
	Wilson's Phalarope	<i>Phalaropus tricolor</i>	few
	LARIDAE		
	California Gull	<i>Larus californicus</i>	single
	Common Tern	<i>Sterna hirundo</i>	single
	ACCIPITRIDAE		
	Ferruginous Hawk	<i>Buteo regalis</i>	single
	PICIDAE		
	Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	single
	TYRANNIDAE; TYRANNINAE		
	Great Crested Flycatcher	<i>Myiarchus crinitus</i>	
	Cassin's Kingbird	<i>Tyrannus vociferans</i>	single
x	Western Kingbird	<i>Tyrannus verticalis</i>	few
x	Eastern Kingbird	<i>Tyrannus tyrannus</i>	
x	Gray Kingbird	<i>Tyrannus dominicensis</i>	new; single
x	Scissor-tailed Flycatcher	<i>Tyrannus forficatus</i>	few
	TYRANNIDAE; FLUVICOLINAE		
x	Olive-sided Flycatcher	<i>Contopus cooperi</i>	few
x	Western Wood-Pewee	<i>Contopus sordidulus</i>	few
x	Eastern Wood-Pewee	<i>Contopus virens</i>	
	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	
x	Acadian Flycatcher	<i>Empidonax virescens</i>	
x	Alder Flycatcher	<i>Empidonax alnorum</i>	

x	Willow Flycatcher	<i>Empidonax traillii</i>	
x	Least Flycatcher	<i>Empidonax minimus</i>	new as host
	Hammond's Flycatcher	<i>Empidonax hammondii</i>	single
x	Gray Flycatcher	<i>Empidonax wrightii</i>	
x	Dusky Flycatcher	<i>Empidonax oberholseri</i>	
x	Western Flycatcher	<i>Empidonax difficilis</i>	
	Buff-breasted Flycatcher	<i>Empidonax fulvifrons</i>	single
x	Black Phoebe	<i>Sayornis nigricans</i>	new as host
x	Eastern Phoebe	<i>Sayornis phoebe</i>	
	Say's Phoebe	<i>Sayornis saya</i>	few
x	Vermilion Flycatcher	<i>Pyrocephalus rubinus</i>	few
	VIREONIDAE		
	Slaty Vireo	<i>Vireo brevipennis</i>	single
x	White-eyed Vireo	<i>Vireo griseus</i>	
	Flat-billed Vireo	<i>Vireo nanus</i>	single
x	Bell's Vireo	<i>Vireo bellii</i>	
x	Black-capped Vireo	<i>Vireo atricapilla</i>	
x	Gray Vireo	<i>Vireo vicinior</i>	new as host
x	Yellow-throated Vireo	<i>Vireo flavifrons</i>	
x	Plumbeous Vireo	<i>Vireo plumbeus</i>	
x	Cassin's Vireo	<i>Vireo cassinii</i>	
x	Blue-headed Vireo	<i>Vireo solitarius</i>	
x	Hutton's Vireo	<i>Vireo huttoni</i>	
x	Eastern Warbling-Vireo	<i>Vireo gilvus</i>	
x	Western Warbling-Vireo	<i>Vireo swainsoni</i>	
x	Philadelphia Vireo	<i>Vireo philadelphicus</i>	few
x	Red-eyed Vireo	<i>Vireo olivaceus</i>	
	Yellow-green Vireo	<i>Vireo flavoviridis</i>	
x	Black-whiskered Vireo	<i>Vireo altiloquus</i>	new
	LANIIDAE		
x	Loggerhead Shrike	<i>Lanius ludovicianus</i>	new; few
	CORVIDAE		
	Blue Jay	<i>Cyanocitta cristata</i>	few
	American Crow	<i>Corvus brachyrhynchos</i>	few
	REMIZIDAE		
x	Verdin	<i>Auriparus flaviceps</i>	few
	PARIDAE		
x	Carolina Chickadee	<i>Poecile carolinensis</i>	few
x	Black-capped Chickadee	<i>Poecile atricapillus</i>	few
x	Mountain Chickadee	<i>Poecile gambeli</i>	new; few
	Tufted Titmouse	<i>Baeolophus bicolor</i>	
	Black-crested Titmouse	<i>Baeolophus atricristatus</i>	few
	ALAUDIDAE		
x	Horned Lark	<i>Eremophila alpestris</i>	
	HIRUNDINIDAE		
	Bank Swallow	<i>Riparia riparia</i>	single
x	Tree Swallow	<i>Tachycineta bicolor</i>	few
	Purple Martin	<i>Progne subis</i>	questionable
x	Barn Swallow	<i>Hirundo rustica</i>	
	Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	few
	AEGITHALIDAE		
x	Bushtit	<i>Psaltiriparus minimus</i>	new as host; few

	SYLVIIDAE		
x	Wrentit	<i>Chamaea fasciata</i>	
	REGULIDAE		
x	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	few
x	Golden-crowned Kinglet	<i>Regulus satrapa</i>	few
	BOMBYCILLIDAE		
	Bohemian Waxwing	<i>Bombycilla garrulus</i>	single
x	Cedar Waxwing	<i>Bombycilla cedrorum</i>	
	PTILOGONATIDAE		
x	Phainopepla	<i>Phainopepla nitens</i>	
	SITTIDAE		
?	White-breasted Nuthatch	<i>Sitta carolinensis</i>	few
	Brown-headed Nuthatch	<i>Sitta pusilla</i>	new; single
x	Red-breasted Nuthatch	<i>Sitta canadensis</i>	few
	CERTHIDAE		
x	Brown Creeper	<i>Certhia familiaris</i>	few
	POLIOPTILIDAE		
x	Blue-gray Gnatcatcher	<i>Polioptila caerulea</i>	
x	Black-capped Gnatcatcher	<i>Polioptila nigriceps</i>	few
	White-lored Gnatcatcher	<i>Polioptila albiloris</i>	
x	Black-tailed Gnatcatcher	<i>Polioptila melanura</i>	
x	California Gnatcatcher	<i>Polioptila californica</i>	
	TROGLODYTIDAE		
x	Rock Wren	<i>Salpinctes obsoletus</i>	new as host
	Boucard's Wren	<i>Campylorhynchus jocosus</i>	
x	Bewick's Wren	<i>Thryomanes bewickii</i>	few
x	Carolina Wren	<i>Thryothorus ludovicianus</i>	
	Eastern Marsh-Wren	<i>Cistothorus palustris</i>	new; single
x	Sedge Wren	<i>Cistothorus stellaris</i>	new; few
x	Northern House Wren	<i>Troglodytes aedon</i>	few
	MIMIDAE		
x	Gray Catbird	<i>Dumetella carolinensis</i>	
	Curve-billed Thrasher	<i>Toxostoma curvirostre</i>	single
x	Brown Thrasher	<i>Toxostoma rufum</i>	
	Long-billed Thrasher	<i>Toxostoma longirostre</i>	single
	Bendire's Thrasher	<i>Toxostoma bendirei</i>	single
	Sage Thrasher	<i>Oreoscoptes montanus</i>	single
x	Northern Mockingbird	<i>Mimus polyglottos</i>	
	STURNIDAE		
x	European Starling	<i>Sturnus vulgaris</i>	few
	TURDIDAE		
x	Eastern Bluebird	<i>Sialia sialis</i>	new as host
x	Western Bluebird	<i>Sialia mexicana</i>	new as host
x	Mountain Bluebird	<i>Sialia currucoides</i>	new as host; few
x	Townsend's Solitaire	<i>Myadestes townsendi</i>	new as host
x	Veery	<i>Catharus fuscescens</i>	
x	Swainson's Thrush	<i>Catharus ustulatus</i>	new as host
x	Hermit Thrush	<i>Catharus guttatus</i>	
x	Wood Thrush	<i>Hylocichla mustelina</i>	
x	American Robin	<i>Turdus migratorius</i>	
	Varied Thrush	<i>Ixoreus naevius</i>	new; single
	PEUCEDRAMIDAE		

x	Olive Warbler	<i>Peucedramus taeniatus</i>	new; single
	PASSERIDAE		
x	House Sparrow	<i>Passer domesticus</i>	
	MONTACILLIDAE		
x	Sprague's Pipit	<i>Anthus spragueii</i>	new as host; single
	FRINGILLIDAE		
	Gray-crowned Rosy-Finch	<i>Leucosticte tephrocotis</i>	new; single
x	Purple Finch	<i>Haemorhous purpureus</i>	
x	House Finch	<i>Haemorhous mexicanus</i>	
	Cassin's Finch	<i>Haemorhous cassinii</i>	new; single
	Red Crossbill	<i>Loxia curvirostra</i>	single
	Redpoll	<i>Acanthis flammea</i>	few
	Pine Siskin	<i>Spinus pinus</i>	
	Lesser Goldfinch	<i>Spinus psaltria</i>	
	Lawrence's Goldfinch	<i>Spinus lawrencei</i>	few
	American Goldfinch	<i>Spinus tristis</i>	
	Evening Grosbeak	<i>Coccothraustes vespertinus</i>	few
	CALCARIIDAE		
	Thick-billed Longspur	<i>Rhynchophanes mccownii</i>	few
x	Chestnut-collared Longspur	<i>Calcarius ornatus</i>	
	PASSERELLIDAE		
x	Rufous-winged Sparrow	<i>Peucaea carpalis</i>	
	Botteri's Sparrow	<i>Peucaea botterii</i>	new; single
	Cassin's Sparrow	<i>Peucaea cassinii</i>	few
x	Bachman's Sparrow	<i>Peucaea aestivalis</i>	new as host
x	Grasshopper Sparrow	<i>Ammodramus savannarum</i>	
	Olive Sparrow	<i>Arremonops rufivirgatus</i>	few
x	Five-striped Sparrow	<i>Amphispiza quinquestriata</i>	few
x	Black-throated Sparrow	<i>Amphispiza bilineata</i>	new as host
x	Lark Sparrow	<i>Chondestes grammacus</i>	
x	Lark Bunting	<i>Calamospiza melanocorys</i>	new as host
x	Chipping Sparrow	<i>Spizella passerina</i>	
x	Clay-colored Sparrow	<i>Spizella pallida</i>	
	Black-chinned Sparrow	<i>Spizella atrogularis</i>	
x	Field Sparrow	<i>Spizella pusilla</i>	
x	Brewer's Sparrow	<i>Spizella breweri</i>	
x	Fox Sparrow	<i>Passerella iliaca</i>	few
x	Dark-eyed Junco	<i>Junco hyemalis</i>	
x	White-crowned Sparrow	<i>Zonotrichia leucophrys</i>	
x	White-throated Sparrow	<i>Zonotrichia albicollis</i>	
	Sagebrush Sparrow	<i>Artemisiospiza nevadensis</i>	few
	Bell's Sparrow	<i>Artemisiospiza belli</i>	new; single
x	Vesper Sparrow	<i>Pooecetes gramineus</i>	
x	LeConte's Sparrow	<i>Ammospiza leconteii</i>	
x	Seaside Sparrow	<i>Ammospiza maritima</i>	single
x	Nelson's Sparrow	<i>Ammospiza nelsoni</i>	new as host; single
x	Baird's Sparrow	<i>Centronyx bairdii</i>	new as host; few
	Henslow's Sparrow	<i>Centronyx henslowii</i>	
x	Savannah Sparrow	<i>Passerculus sandwichensis</i>	
x	Song Sparrow	<i>Melospiza melodia</i>	
x	Lincoln's Sparrow	<i>Melospiza lincolnii</i>	
x	Swamp Sparrow	<i>Melospiza georgiana</i>	

	Rusty-crowned Ground-Sparrow	<i>Melozone kieneri</i>	
x	Canyon Towhee	<i>Melozone fusca</i>	
x	Abert's Towhee	<i>Melozone aberti</i>	
x	California Towhee	<i>Melozone crissalis</i>	
x	Rufous-crowned Sparrow	<i>Aimophila ruficeps</i>	new as host
x	Green-tailed Towhee	<i>Pipilo chlorurus</i>	new as host; few
x	Spotted Towhee	<i>Pipilo maculatus</i>	
x	Eastern Towhee	<i>Pipilo erythrophthalmus</i>	
	ICTERIIDAE		
x	Yellow-breasted Chat	<i>Icteria virens</i>	
	ICTERIDAE		
	Yellow-headed Blackbird	<i>Xanthocephalus xanthocephalus</i>	
x	Bobolink	<i>Dolichonyx oryzivorus</i>	
x	Eastern Meadowlark	<i>Sturnella [Sturnella] magna</i>	
x	Western Meadowlark	<i>Sturnella [Sturnella] neglecta</i>	new as host
x	Orchard Oriole	<i>Icterus spurius</i>	
x	Hooded Oriole	<i>Icterus cucullatus</i>	
	Altamira Oriole	<i>Icterus gularis</i>	new; single
	Audubon's Oriole	<i>Icterus graduacauda</i>	
x	Baltimore Oriole	<i>Icterus galbula</i>	
x	Bullock's Oriole	<i>Icterus bullockii</i>	few
	Scott's Oriole	<i>Icterus parisorum</i>	single
x	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	
	Tricolored Blackbird	<i>Agelaius tricolor</i>	single
	Rusty Blackbird	<i>Euphagus carolinus</i>	few
x	Brewer's Blackbird	<i>Euphagus cyanocephalus</i>	
	Common Grackle	<i>Quiscalus quiscula</i>	
	PARULIDAE		
x	Ovenbird	<i>Seiurus aurocapilla</i>	
x	Worm-eating Warbler	<i>Helmitheros vermivorum</i>	
x	Northern Waterthrush	<i>Parkesia noveboracensis</i>	
x	Louisiana Waterthrush	<i>Parkesia motacilla</i>	
x	Blue-winged Warbler	<i>Vermivora cyanoptera</i>	
x	Golden-winged Warbler	<i>Vermivora chrysoptera</i>	
x	Black-and-white Warbler	<i>Mniotilta varia</i>	
x	Prothonotary Warbler	<i>Protonotaria citrea</i>	
x	Swainson's Warbler	<i>Limnothlypis swainsonii</i>	
x	Tennessee Warbler	<i>Leiothlypis peregrina</i>	few
x	Orange-crowned Warbler	<i>Leiothlypis celata</i>	
x	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	
x	Virginia's Warbler	<i>Leiothlypis virginiae</i>	few
x	Lucy's Warbler	<i>Leiothlypis luciae</i>	
	Gray-crowned Yellowthroat	<i>Geothlypis poliocephala</i>	single
x	MacGillivray's Warbler	<i>Geothlypis tolmiei</i>	
x	Mourning Warbler	<i>Geothlypis philadelphia</i>	
x	Kentucky Warbler	<i>Geothlypis formosa</i>	
x	Common Yellowthroat	<i>Geothlypis trichas</i>	
x	Hooded Warbler	<i>Setophaga citrina</i>	
x	American Redstart	<i>Setophaga ruticilla</i>	
x	Kirtland's Warbler	<i>Setophaga kirtlandii</i>	
x	Cape May Warbler	<i>Setophaga tigrina</i>	new; few
x	Cerulean Warbler	<i>Setophaga cerulea</i>	

x	Northern Parula	<i>Setophaga americana</i>	
x	Topical Parula	<i>Setophaga pitaiayumi</i>	few
x	Magnolia Warbler	<i>Setophaga magnolia</i>	
x	Bay-breasted Warbler	<i>Setophaga castanea</i>	few
x	Blackburnian Warbler	<i>Setophaga fusca</i>	
x	Yellow Warbler	<i>Setophaga aestiva</i>	
x	Chestnut-sided Warbler	<i>Setophaga pensylvanica</i>	
x	Blackpoll Warbler	<i>Setophaga striata</i>	few
x	Black-throated Blue Warbler	<i>Setophaga caerulescens</i>	
x	Palm Warbler	<i>Setophaga palmarum</i>	
x	Pine Warbler	<i>Setophaga pinus</i>	
x	Yellow-rumped Warbler	<i>Setophaga coronata</i>	
x	Yellow-throated Warbler	<i>Setophaga dominica</i>	few
x	Prairie Warbler	<i>Setophaga discolor</i>	
x	Grace's Warbler	<i>Setophaga graciae</i>	few
x	Black-throated Gray Warbler	<i>Setophaga nigrescens</i>	
x	Townsend's Warbler	<i>Setophaga townsendi</i>	single
x	Hermit Warbler	<i>Setophaga occidentalis</i>	few
x	Golden-cheeked Warbler	<i>Setophaga chrysoparia</i>	
x	Black-throated Green Warbler	<i>Setophaga virens</i>	
x	Canada Warbler	<i>Cardellina canadensis</i>	
x	Wilson's Warbler	<i>Cardellina pusilla</i>	
x	Red-faced Warbler	<i>Cardellina rubrifrons</i>	new; few
	Painted Redstart	<i>Myioborus pictus</i>	single
	CARDINALIDAE		
x	Summer Tanager	<i>Piranga rubra</i>	
x	Scarlet Tanager	<i>Piranga olivacea</i>	
x	Western Tanager	<i>Piranga ludoviciana</i>	few
x	Northern Cardinal	<i>Cardinalis cardinalis</i>	
	Pyrrhuloxia	<i>Cardinalis sinuatus</i>	
x	Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>	
x	Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>	new as host
x	Blue Grosbeak	<i>Passerina caerulea</i>	
x	Lazuli Bunting	<i>Passerina amoena</i>	
x	Indigo Bunting	<i>Passerina cyanea</i>	
x	Varied Bunting	<i>Passeria versicolor</i>	new; few
x	Painted Bunting	<i>Passeria ciris</i>	
x	Dickcissel	<i>Spiza americana</i>	
	THRAUPIDAE		
	Cinnamon-rumped Seedeater	<i>Sporophila torqueola</i>	few

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Literature Cited

- Alderson, G. W., H. L. Gibbs and S. G. Sealy. 1999a. Parentage and kinship studies in an obligate brood parasitic bird, the Brown-headed Cowbird (*Molothrus ater*), using microsatellite DNA markers. *Journal of Heredity* 90: 182-190.
- Alderson, G. W., H. L. Gibbs and S. G. Sealy. 1999b. Determining the reproductive behaviour of individual Brown-headed Cowbirds using microsatellite DNA markers. *Animal Behaviour* 58: 895-905.
- Bailey, A. A., and R. J. Niedrach. 1965. *Birds of Colorado*. Denver Museum of Natural History, Denver, CO.
- Baltz, M. E. 1996. The distribution and status of Shiny Cowbirds on Andros Island [Bahamas]. *Bahamas Journal of Science* 3 (2): 2-6.
- Beltzer, A. H. 1986. *Cacicus solitarius* hospedante de *Molothrus bonariensis bonariensis* (Aves: Icteridae). *Revista de la Asociacion de Ciencias Naturales del Litoral* 17: 215-216.
- BirdLife International. 2000. *Threatened birds of the world*. Lynx Ediciones and BirdLife International, Barcelona, Spain, and Cambridge, UK.
- Bodrati, A., and R. M. Fraga. 2010. Frequent parasitism of Golden-winged Caciques (*Cacicus chrysopterus*) by Shiny Cowbirds (*Molothrus bonariensis*) in the Chaco region of Argentina and Paraguay. *Revista Brasileira de Ornitologia* 18: 110-112.
- Boggs, G. O. 1961. Notas sobre las aves de 'El Centro' en el valle medio del Rio Magdalena - Colombia. *Novedades Colombianas* 1 (6): 401-423.
- Bowen, R. V. 1997. Townsend's Solitaire (*Myadestes townsendi*). In *Birds of North America*, No. 269 (A. Poole and F. Gill, eds.). Academy of Natural Science, Philadelphia, PA; American Ornithologists' Union., Washington, DC.
- Bowers, R. K., Jr., and J. B. Dunning, Jr. 1984. Nest parasitism by cowbirds on Buff-breasted Flycatchers, with comments on nest-site selection. *Wilson Bulletin* 96: 718-719.
- Bowers, R. K., Jr., and J. B. Dunning, Jr. 1994. Buff-breasted Flycatcher (*Empidonax fulvifrons*). In *Birds of North America*, No. 125 (A. Poole and F. Gill, eds.). Academy of Natural Science, Philadelphia, PA; American Ornithologists' Union., Washington, DC.
- Brown, C. R. 1997. Purple Martin (*Progne subis*). In *Birds of North America*, No. 287 (A. Poole and F. Gill, eds.). Academy of Natural Science, Philadelphia, PA; American Ornithologists' Union., Washington, DC.
- Brush, T. 1998. A closer look: Altamira Oriole. *Birding* 30: 46-53.
- Campbell, R. W., N. K. Dawe, I. McTaggart-Cowan, J. M. Cooper, G. W. Kaiser, M. C. E. McNall and G. E. J. Smith. 1997. *The birds of British Columbia*, vol. 3, Passerines, Flycatchers through vireos. University of British Columbia Press, Vancouver, BC.
- Campbell, R. W., N. K. Dawe, I. McTaggart-Cowan, J. M. Cooper, G. W. Kaiser, A. C. Stewart and M. C. E. McNall. 2001. *The birds of British Columbia*, vol. 4, Passerines, Wood-Warblers through Old World sparrows. University of British Columbia Press, Vancouver, BC. ³⁰
- Carlson, C. E. 1943. Unusual pheasant nests from Minnesota. *Flicker* 15: 29-31.
- Cavalcanti, R. B., and T. M. Pimentel. 1988. Shiny Cowbird parasitism in central Brazil. *Condor* 90: 40-43.
- Chace, J. F. 1997. Cowbird parasitism in the Huachuca Mountains of southeastern Arizona [abstract]. *Proceedings of 1997 Cowbird Workshop*, 23 - 25 Oct 1997, Sacramento, CA.
- Chace, J. F., and A. Cruz. 1996. Knowledge of the Colorado host relations of the parasitic Brown-headed Cowbird (*Molothrus ater*). *C[olorado]. F[ield]. O[rnithol]. Journal* 30: 67-81.
- Clotfelter, E. D., and T. Brush. 1995. Unusual parasitism by the Bronzed Cowbird. *Condor* 97: 814-815.
- Collins, P. W. 1999. Rufous-crowned Sparrow (*Aimophila ruficeps*). In *Birds of North America*, No. 472 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA.
- Corman, T. E., and C. Wise-Gervais, eds. 2005. *Arizona breeding bird atlas*. University of New Mexico Press, Albuquerque, NM.
- Costa, L. M. 2013. A novel host of the Shiny Cowbird (*Molothrus bonariensis*): the near-threatened Pale-throated Serra-Finch (*Embernagra longicauda*). *Ornitologia Neotropical* 24: 95-99.
- Cruz, A., and R. W. Andrews. 1997. The breeding biology of the Pied Water-Tyrant and its interactions with the Shiny Cowbird in Venezuela. *Journal of Field Ornithology* 68: 91-97.
- Cruz, A., T. D. Manolis and J. W. Wiley. 1985. *The Shiny Cowbird: A brood parasite expanding its range*

- in the Caribbean region. *Ornithological Monographs* 36: 607-620.
- Cruz, A., W. Post, J. W. Wiley, C. P. Ortega, T. K. Nakamura and J. W. Prather. 1998. Potential impacts of cowbird range expansion in Florida, pp. 313-336. In S. I. Rothstein and S. K. Robinson (eds.), *Parasitic birds and their hosts. Studies in coevolution.* Oxford University Press, Oxford, UK.
- Cruz, A., J. W. Prather, W. Post and J. W. Wiley. 2000. The spread of Shiny and Brown-headed Cowbirds into the Florida region, pp 47-57. In *Ecology and management of cowbirds and their hosts. Studies in the conservation of North American passerine birds* (J. N. M. Smith, T. L. Cook, S. I. Rothstein and S. G. Sealy, eds.), University of Texas Press, Austin, TX.
- Cruz, A., J. W. Wiley, T. K. Nakamura and W. Post. 1989. The Shiny Cowbird *Molothrus bonariensis* in the West Indian region -- biogeography and ecological implications, pp. 519-540. In C. A. Wood (ed.), *Biogeography of the West Indies.* Sandhill Crane Press, Gainesville, FL.
- Davis, S. K. and S. G. Sealy. 1998. Nesting biology of the Baird's Sparrow in southwestern Manitoba. *Wilson Bulletin* 110: 262-270.
- Davis, S. K., and S. G. Sealy. 2000. Cowbird parasitism and nest predation in fragmented grasslands of southwestern Manitoba. Pp. 220 - 228. In *Ecology and management of cowbirds and their hosts* (J. N. M. Smith, T. L. Cook, S. I. Rothstein, S. K. Robinson and S. G. Sealy, eds.). University of Texas Press, Austin, TX.
- Debrot, A. O., and T.G. Prins. 1992. First record and establishment of the Shiny Cowbird in Curaçao. *Caribbean Journal of Science* 28: 104-105.
- De Geus, D. W., and L. B. Best. 1991. Brown-headed Cowbirds parasitize Loggerhead Shrikes: First records for family Laniidae. *Wilson Bulletin* 103: 504-506.
- de Mársico, M. C., B. Mahler and J. C. Reboreda. 2010. Reproductive success and nestling growth of the Baywing parasitized by Screaming and Shiny cowbirds. *Wilson Journal of Ornithology* 122: 417-431.
- de Mársico, M., and J. C. Reboreda. 2008. Egg-laying behavior in Screaming Cowbirds: why does a specialist brood parasite waste so many eggs? *Condor* 110: 143-153.
- Di Giacomo, A. G. 1995. Nidificación de *Thamnophilus doliatus* en Argentina. *Hornero* 15: 53-57.
- Di Giacomo, A. G., B. Mahler, and J. C. Reboreda. 2010. Screaming Cowbird parasitism of nests of Solitary Caciques and Cattle Tyrants. *Wilson Journal of Ornithology* 122: 795-799.
- Dinelli, L. 1918. Notas biológicas sobre las aves del noroeste de la República Argentina. *Hornero* 1: 57-68.
- Dolan, P. M., and P. L. Wright. 1984. Damaged Western Flycatcher eggs in nests containing Brown-headed Cowbird chicks. *Condor* 86: 483-485.
- Ellison, K. 1999. Importance of predation and brood parasitism on nest success in four sparrow species in southern Californian coastal sage scrub. *Studies in Avian Biology* 18: 191-199.
- Ellison, E., and C. Gagliardi. 2008. First record of parasitism and unusual time of laying for the Brown-headed Cowbird (*Molothrus ater*) at the nest of a Hooded Merganser (*Lophodytes cucullatus*). *Passenger Pigeon* 70: 401-403.
- Ellison, K. S., S. G. Sealy, and H. L. Gibbs. 2006. Genetic elucidation of host use by individual sympatric Bronzed Cowbirds (*Molothrus aeneus*) and Brown-headed Cowbirds (*M. ater*). *Canadian Journal of Zoology* 84: 1269-1280.
- Ellison, K. S., S. G. Sealy and H. P. McGaha. 2007. Color variation among nestling Brown-headed Cowbirds (*Molothrus ater*) does not reflect differential success with hosts in Texas. *Auk* 124: 526-536.
- Fernández-Popo, M., F. González-García and D. Santiago-Alarcon. 2021. First record of brood parasitism between Bronzed Cowbird (*Molothrus aeneus*) and Golden-crowned Warbler (*Basileuterus culicivorus*). *Wilson Journal of Ornithology* 133: 343-347.
- Fleischer, R. C. 1985. A new technique to identify and assess the dispersion of eggs of individual brood parasites. *Behavioural Ecology and Sociobiology* 17: 91-99.
- Flood, N. J. 2002. Scott's Oriole (*Icterus parisorum*). In *Birds of North America*, No. 608 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA.
- Fraga, R. M. 1986. The Bay-winged Cowbird (*Molothrus badius*) and its brood parasites: Interactions, coevolution, comparative efficiency. Ph.D. dissertation, University of California-Santa Barbara, Santa Barbara, CA.
- Fraga, R. M. 1996. Further evidence of parasitism of Chopi Blackbirds (*Gnorimopsar chopi*) by the specialized Screaming Cowbird (*Molothrus rufoaxillaris*). *Condor* 98: 866-867

- Fraga, R. M. 1998. The interactions of the parasitic Screaming and Shiny Cowbirds (*Molothrus rufoaxillaris* and *M. bonariensis*) with a shared host, the Bay-winged Cowbird (*Molothrus badius*), pp. 173 - 193. In S. I. Rothstein and S. K. Robinson, eds., Parasitic birds and their hosts. Oxford University Press, Oxford.
- Fraga, R. M. 2002. Notes on new or rarely reported Shiny Cowbird hosts from Argentina. *Journal of Field Ornithology* 73: 213-219.
- Fraga, R. M. 2005. The Brown-backed Mockingbird (*Mimus dorsalis*) as a Shiny Cowbird (*Molothrus bonariensis*) host. *Ornitologia Neotropical* 16: 435-436.
- Fraga, R. and E. de Juana. 2020. Variable Oriole (*Icterus pyrrhopterus*), version 1.0. In *Birds of the World* (J. del Hoyo, A. Elliott, J. Sargatal, D. A. Christie, and E. de Juana, eds.). Cornell Lab of Ornithology, Ithaca, NY. <https://doi.org/10.2173/bow.epaori4.01>
- Fraga, R. M., and S. Kreft. 2007. Natural history and breeding behavior of the Olive (*Psarocolius yuracares*) and Yellow-billed (*P. angustifrons alfredi*) Oropendolas in Chapare Province, Bolivia. *Ornitologia Neotropical* 18: 251-261.
- Fraga, R. M., G. Pugnali and H. Casañas. 1998. Natural history and conservation status of the endangered Saffron-cowled Blackbird *Xanthopsar flavus* in Argentina. *Bird Conservation International* 8: 255-267.
- Friedmann, H. 1929. The cowbirds: a study in the biology of social parasitism. C. Thomas, Publisher, Springfield, IL.
- Friedmann, H. 1963. Host relations of the parasitic cowbirds. U.S. National Museum Bulletin 233.
- Friedmann, H., and L. F. Kiff. 1985. The parasitic cowbirds and their hosts. *Proceedings Western Foundation of Vertebrate Zoology* 2: 225-304.
- Friedmann, H., L. F. Kiff, and S. I. Rothstein. 1977. A further contribution to knowledge of the host relations of the parasitic cowbirds. *Smithsonian Contribution to Zoology* 235.
- Gaines, D. 1988. *Birds of Yosemite and the East Slope*. Artemisia Press, Lee Vining, CA.³²
- Gardali, T., and G. Ballard. 2000. Warbling Vireo (*Vireo gilvus*). In *Birds of North America*, No. 551 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA.
- Gochfeld, M. 1979. Brood parasite and host coevolution: Interactions between Shiny Cowbirds and two species of meadowlarks. *American Naturalist* 113: 855-870.
- Gomes, H. B., and M. Rodrigues. 2010. The nest of the Cipó Canastero (*Asthenes luizae*), an endemic furnariid from the Espinhaço Range, southeastern Brazil. *Wilson Journal of Ornithology* 122: 600-603.
- González-García, F. 2007. First record of Bronzed Cowbird (*Molothrus aeneus*) parasitism of the Common Bush-Tanager (*Chlorospingus ophthalmicus*). *Wilson Journal of Ornithology* 119: 312-314.
- González-García, F., A. M. Hernández and D. Santiago-Alarcon. 2021. First record of non-migratory Blue-gray Gnatcatcher (*Polioptila caerulea*) as a host to the Bronzed Cowbird (*Molothrus aeneus*) in Mexico. *Wilson Journal of Ornithology*, 132:779-784.
- Grant, C. H. B. 1912. Notes on some South-American birds. *Ibis*, series 10, 1: 273-280.
- Greeney, H. F. 2018. The nest and eggs of Black-capped Sparrow *Arremon abeillei* (Passerellidae) in southwestern Ecuador. *Revista Ecuatoriana de Ornitología* 3: 32-42.
- Groschupf, K. D., and C. W. Thompson. 1998. Varied Bunting (*Passerina versicolor*). In *Birds of North America*, No. 351 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA.
- Hahn, D. C., J. A. Sedgwick, I. S. Painter and N. J. Casna. 1999. A spatial and genetic analysis of cowbird host selection. *Studies in Avian Biology* 18: 204-217.
- Hargis, A., and R. Fedders. 2022. eBird checklist S119667791. <https://ebird.org/checklist/S119667791>
- Hathcock, C. R. 2000. Factors affecting reproductive success in hosts of the Bronzed Cowbird (*Molothrus aeneus*) in the Rio Grande Valley, Texas. M.S. thesis, University of Texas-Pan American, Edinberg, TX.
- Herkert, J. R., D. E. Kroodsma and J. P. Gibbs. 2001. Sedge Wren (*Cistothorus platensis*). In *Birds of North America*, No. 582 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA.
- Hill, N. P. 1968. *Ammospiza caudacuta caudacuta* (Gmelin) Eastern Sharp-tailed Sparrow. Pp. 785-812, in *Life histories of North American cardinals, grosbeaks, buntings, towhees, finches, sparrows, and allies* (O. L. Austin, Jr., ed). U.S. National Museum Bulletin 237, part 2.

- Hilty, S. and E. de Juana. 2020. Black-and-white Tanager (*Conothraupis speculigera*), version 1.0. In Birds of the World (J. del Hoyo, A. Elliott, J. Sargatal, D. A. Christie, and E. de Juana, eds.). Cornell Lab of Ornithology, Ithaca, NY. <https://doi.org/10.2173/bow.bawtan1.01>
- Hoy, G., and J. Ottow. 1964. Biological and oological studies of the molothrine cowbirds (Icteridae) of Argentina. *Auk* 81: 186-203.
- Ingebritson, A. 2026. eBird checklist S345554645. eBird, Ithaca, NY. <https://ebird.org/checklist/S345554645>
- Jaramillo, A., and P. Burke. 1999. New World blackbirds. The icterids. Princeton University Press, Princeton, NJ.
- Johnsgard, P. A. 1997. The avian brood parasites. Deception at the nest. Oxford University Press, Oxford, UK.
- Johnson, M. J., C. Van Ripper III, and K. M. Pearson. 2002. Black-throated Sparrow (*Amphispiza bilineata*). In Birds of North America, No. 637 (A. Poole & F. Gill, Eds.). The Birds of North America, Inc., Philadelphia, PA.
- Jones, F. M. 1941. The cowbird. *Oologist* 58:117-119.
- Kattan, G. H. 1997. Shiny Cowbirds follow the 'shotgun' strategy of brood parasitism. *Animal Behaviour* 53: 647-654.
- Kellogg, C. D. 1900. Cowbird in a dove's nest. *Bird Lore* 2: 121.
- Khil, L. 2026. Scrub Blackbird *Dives warczewiczi* as a novel host of Giant Cowbird *Molothrus oryzivorus*. *Ornitología Neotropical* submitted.
- King, A. P. 1979. Variables affecting parasitism in the North American cowbird (*Molothrus ater*). Ph.D. dissertation, Cornell University, Ithaca, NY.
- Koons, D. N. 2000. First record of Brown-headed Cowbird egg in a Lesser Scaup nest. *Wilson Bulletin* 112: 544.
- Latta, S., C. Rimmer, A. Keith, J. Wiley, H. Raffaele, K. McFarland and E. Fernandez. 2006. Field guide to the birds of the Dominican Republic & Haiti. Christopher Helm, London.
- Laubach, R. 1984. Breeding birds of Sheeder Prairie Preserve, west-central Iowa. *Proceedings Iowa Academy of Science* 91: 153-163.
- Lehmann V., F. C. 1960. Contribuciones al estudio de la fauna de Colombia. XV. Novedades Colombianas 1: 256-276.
- Lillo, M. 1902. Enumeración sistemática de las aves de la provincia de Tucumán. *Anales del Museo Nacional de Historia Natural de Buenos Aires* 8 (Series 3): 169-221.
- Llanes Sosa, A., and J. Hernández de Armas. 1995. [New host of *Molothrus bonariensis* (Familia Emberizidae) [sic] for Cuba.] *El Pitirre* 8 (3): 3-4.
- Lopes, L. E., J. C. Peixoto and D. Hoffmann. 2013. Notas sobre a biologia reprodutiva de aves brasileiras. *Atualidades Ornitologias On-line*, No. 171: 33-49.
- López Lanús, B., A. G. Di Giacomo and M. Babarskas. 1999. Estudios sobre la ecología y el comportamiento de la Pajonalera Pico Recto *Limnortyx rectirostris* en la Reserva Otamendi, Buenos Aires, Argentina. *Cotinga* 12: 61-63.
- Lowther, P. E. 1993. Brown-headed Cowbird (*Molothrus ater*). In Birds of North America, No. 47 (A. Poole and F. Gill, Eds.). Academy of Natural Science, Philadelphia, PA; American Ornithologists' Union., Washington, DC.
- Lowther, P. E. 1995. Bronzed Cowbird (*Molothrus aeneus*). In Birds of North America, No. 144 (A. Poole and F. Gill, Eds.). Academy of Natural Science, Philadelphia, PA; American Ornithologists' Union., Washington, DC.
- Lowther, P. E., and W. Post. 1999. Shiny Cowbird (*Molothrus bonariensis*). In Birds of North America, No. 399 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA.
- Mahler, B., V. A. Confalonieri, I. J. Lovette and J. C. Reboreda. 2007. Partial host fidelity in nest selection by the Shiny Cowbird (*Molothrus bonariensis*), a highly generalist avian brood parasite. *Journal of Evolutionary Biology* 20: 1918-1923.
- Mahler, B., Y. Sarquis Adamson, A. G. Di Giacomo, V. A. Confalonieri and J. C. Reboreda. 2009. Utilization of a new host in the Screaming Cowbird *Molothrus rufoaxillaris*, a host specialist brood parasite: host switch or host acquisition? *Behavioral Ecology and Sociobiology* 63:1603-1608.
- Marchant, S. 1960. The breeding of some S.W. Ecuadorian birds. *Ibis* 102: 584-599.

- Marín, M. 2000. The Shiny Cowbird (*Molothrus bonariensis*) in Chile: Introduction or dispersion? Its hosts and parasitic trends. *Ornitología Neotropical* 11: 285-296.
- Marshall, R. M., and S. H. Stoleson. 2000. Chapter 3: threats, pp. 13 - 24. *In* Status, ecology, and conservation of the Southwestern Willow Flycatcher (D. M. Finch and S. H. Stoleson, eds.), USDA Forest Service General Technical Report RMRS-GTR-60.2000.
- Marini, M. A., N. M. Heming, M. Assis, N. O. M. Sousa, L. Rumpel, T. L. de Silva and Y. Ballarini. 2025. Eltonian shortfall of Neotropical brood parasitism: untapped records from museums and recent field studies. *Wilson Journal of Ornithology* 137: 83-97.
- Martin, T. E., and P. M. Barber. 1995. Red-faced Warbler (*Cardellina rubrifrons*). *In* Birds of North America, No. 152 (A. Poole and F. Gill, Eds.). Academy of Natural Science, Philadelphia, PA; American Ornithologists' Union., Washington, DC.
- Mason, P. 1985. The nesting biology of some passerines of Buenos Aires, Argentina. *Ornithological Monographs* 36: 954-972.
- Mason, P. 1986a. Brood parasitism in a host generalist, the Shiny Cowbird: I. The quality of different species as hosts. *Auk* 103: 52-60.
- Mason, P. 1986b. Brood parasitism in a host generalist, the Shiny Cowbird: II. Host selection. *Auk* 103: 61-69.
- Maurício, G. N. 2011. The Orange-breasted Thornbird (*Phacellodomus ferrugineigula*) (Furnariidae): a new effective host of Shiny Cowbird (*Molothrus bonariensis*) (Icteridae). *Wilson Journal of Ornithology* 123: 416-417.
- McCrary, J. K., and J. E. Gates. 2007. Evidences of brood parasitism of Giant Cowbird (*Molothrus oryzivorus*) on Spot-breasted (*Icterus pectoralis*) and Streak-backed (*I. pustulatus*) orioles. *Ornitología Neotropical* 18: 111-115.
- McGeen, D. S. 1972. Cowbird-host relationships. *Auk* 89: 360-380.
- McGeen, D. S., and J. J. McGeen 1968. The cowbirds of Otter Lake. *Wilson Bulletin* 80: 84-93.
- Mermoz, M. E., E. M. Charnelli, D. M. Depalma and C. Zilli. 2018. Scarlet-headed Blackbird (*Amblyramphus holosericeus*): a new effective host for the specialized Screaming Cowbird (*Molothrus rufoaxillaris*) that is not a cooperative breeder. Poster, AFO/WOS meeting, June 2018.
- Mermoz, M. E., and J. C. Reboreda. 1994. Brood parasitism of the Shiny Cowbird, *Molothrus bonariensis*, on the Brown-and-Yellow Marshbird, *Pseudoleistes virescens*. *Condor* 96: 716-721.
- Mermoz, M. E., and J. C. Reboreda. 1996. New host for a specialized brood parasite, the Screaming Cowbird. *Condor* 98: 630-632.
- Miles, D. B. 1986. A record of Brown-headed Cowbird (*Molothrus ater*) nest parasitism of Rufous-crowned Sparrows (*Aimophila ruficeps*). *Southwestern Naturalist* 31: 253-254.
- Molina, P. 2022. Vaquero Brilloso *Molothrus bonariensis* y Bolsero Colimarillo *Icterus mesomelas*: parasitismo de puesta. *Revista Ecuatoriana de Ornitología* 8: 79-80.
- Molina Abril, P, A. Otavalo, M. Juniñs and H. Cadena-Ortiz. 2024. Parasitismo de cría: nuevos eventos para el vaquero brillante *Molothrus bonariensis*. *Revista Catalana d'Ornitologia* 40: 34-43.
- Mollhoff, W. J. 2004 [=2005]. The 2002 Nebraska nest report. *Nebraska Bird Review* 72 (4): 153-158. (p. 158: ... young cowbird was noted being fed by a Lark Bunting (HH [= Helen Hughson]).")
- Nordhagen, T. J., M. P. Nordhagen and P. Hendricks. 2005. Nelson's Sharp-tailed Sparrow nest parasitized by Brown-headed Cowbird. *Wilson Bulletin* 117: 403-404.
- Nores, A. I., and M. Nores. 1994. Nest building and nesting behavior of the Brown Cacholote. *Wilson Bulletin* 106: 106-120.
- Olrog, C. C. 1979. Nueva lista de la avifauna Argentina. *Opera Lilloana* No. 27, Tucumán, Argentina.
- Oppel, S., H. M. Schaefer and V. Schmidt. 2003. Description of the nest, eggs, and breeding behavior of the endangered Pale-headed Brush-Finch (*Atlapetes pallidiceps*) in Ecuador. *Wilson Bulletin* 115: 360-366.
- Ortega, C. 1998. Cowbirds and other brood parasites. University of Arizona Press, Tucson, AZ.
- Paul, R. T. 1989. The nesting season. June 1 - July 31, 1989. Florida region. *American Birds* 43: 1307-1310.
- Peer, B. D., S. I. Rothstein and J. W. Rivers. 2005. First record of Bronzed Cowbird parasitism on the Great-tailed Grackle. *Wilson Bulletin* 117: 194-196.
- Pereyra, J. A. 1938. Aves de la zona ribereña nordeste de la Provincia de Buenos Aires. *Memorias del Jardín Zoológico de La Plata* 9: 1-304.
- Pérez-Rivera, R. A. 1986. Parasitism by the Shiny Cowbird in the interior parts of Puerto Rico. *Journal of*

- Field Ornithology 57: 99-104.
- Picman, J. 1986. Attempted nest parasitism of the Marsh Wren by a Brown-headed Cowbird. *Condor* 88: 381-382.
- Post, W. 1992. First Florida specimens of the Shiny Cowbird. *Florida Field Naturalist* 20: 17-18.
- Post, W., T. K. Nakamura and A. Cruz. 1990. Patterns of Shiny Cowbird parasitism in St. Lucia and southwestern Puerto Rico. *Condor* 92: 461-469.
- Pranty, B. 1995. Florida Ornithological Society Field Observations Committee fall report: August - November 1995. *Florida Field Naturalist* 24: 48-59.
- Pranty, B. 2000. Possible anywhere: Shiny Cowbird. *Birding* 32: 514-526.
- Raffaele, H., J. Wiley, O. Garrido, A. Keith and J. Raffaele. 1998. A guide to the birds of the West Indies. Princeton University Press, Princeton, NJ.
- Ramoni-Perazzi, P., G. Bianchi-Ballesteros, L. D. Otero, I. A. Soto-Werschitz and G. Bianchi-Pérez. 2010. Giant Cowbird (*Molothrus oryzivora*) as brood-parasite of the Green Jay (*Cyanocorax yncas*) in the Venezuelan Andes. *Ornitología Neotropical* 20: 305-309.
- Reetz, M. J., E. Farley and T. A. Contreras. 2008. Evidence for Bachman's Sparrow raising Brown-headed Cowbirds to fledging. *Wilson Journal of Ornithology* 120: 625-627.
- Robertson, W. B., Jr., and G. E. Woolfenden. 1992. Florida Bird species: an annotated list. Florida Ornithological Society, Special Publication No. 6.
- Robinson, S. K. 1988. Foraging ecology and host relationships of Giant Cowbirds in southeastern Peru. *Wilson Bulletin* 100: 224-235.
- Rochido, V. B. 2001a. Primeiros registros de nidoparasitismo por *Molothrus bonariensis* em *Knipolegus nigerrimus* na Serra do Caraça, Minas Gerais. Resumos do IX Congresso Brasileiro de Ornitologia, R177. http://www.ararajuba.org.br/sbo/res_ix_cbo.pdf
- Rochido, V. B. 2001b. Nidoparasitismo por *Molothrus bonariensis* (Emberizidae: Icterinae) em *Hirundinea ferruginea* (Tyrannidae: Fluvicolinae) na Serra do Caraça, Minas Gerais. Resumos do IX Congresso Brasileiro de Ornitologia, R178. http://www.ararajuba.org.br/sbo/res_ix_cbo.pdf
- Rothstein, S. I., B. E. Kus, M. J. Whitefield and S. J. Sferra. 2003. Recommendations for cowbird management in recovery efforts for the Southwestern Willow Flycatcher. *Studies in Avian Biology* 26: 157-167.
- Russell, S. M., and G. Monson. 1998. The birds of Sonora. University of Arizona Press, Tucson, AZ.
- Russell, T. M., D. T. Fradet, P. M. Tatom and A. Engilis, Jr. 2023. First observations of Brown-headed Cowbird (*Molothrus ater*) parasitism of Black Phoebe (*Sayornis nigricans*) in the Sacramento Valley, California. *Wilson Journal of Ornithology* 135: 582-589.
- Salgado-Ortiz, J., P. P. Marra, T. S. Sillett and R. J. Robertson. 2008. Breeding ecology of the Mangrove Warbler (*Dendroica petechia bryanti*) and comparative life history of the Yellow Warbler subspecies complex. *Auk* 125: 402-410.
- Salvador, S. A. 1983. Parasitismo de cría del Renegrido (*Molothrus bonariensis*) en Villa María, Córdoba, Argentina (Aves: Icteridae). *Historia Natural* 3 (16): 149-158.
- Salvador, S. A. 2012. Víctimas del tordo renegrido (*Molothrus bonariensis bonariensis*) en la República Argentina. *Historia Natural (Tercera Serie)* 2: 117-138.
- Salvador, S. A., and A. Bodrati. 2014. Actualización de las víctimas de parasitismo del Tordo Renegrido (*Molothrus bonariensis bonariensis*) en la República Argentina. *Biológica* 17: 23-35.
- Salvador, S. A. and S. Narosky. 1983. Nuevos nidos de aves Argentinas. *Muscisaxicola rufivertex*, *Catamenia inornata*, *Sicalis olivascens* y *Carduelis crassirostris*. *Hornero* 12: 134-137.
- Salvador, S. A., and L. A. Salvador. 1984. Notas sobre hospedantes del renegrido (*Molothrus bonariensis*) (Aves: Icteridae). *Historia Natural* 4 (13): 121-130.
- Schönwetter, M. 1981. Handbuch der Oologie. Akademie-Verlag, Berlin.
- Sealy, S. G. 1999. Cowbird parasitism on Lark Buntings: frequency, acceptance, and fledging. *Journal of Field Ornithology* 70:182-186.
- Sealy, S. G. 2015. Egg laying in inappropriate nests by the Brown-headed Cuckoo (*Molothrus ater*): acts of parasitism or emergency egg dumping. *Canadian Field Naturalist* 129: 60-69.
- Sealy, S. G., and J. C. Lorenzana. 1997. Feeding of nestling and fledging brood parasites by individuals other than their foster parents: A review. *Canadian Journal of Zoology* 75: 1739-1752.
- Sealy, S. G., J. E. Sánchez, R. G. Campos R. and M. Marín. 1997. Bronzed Cowbird hosts: New records, trends in host use, and cost of parasitism. *Ornitología Neotropical* 8: 175-184.

- Shaffer, J. A., C. M. Goldade, M. F. Dinkins, D. H. Johnson, L. D. Igl, and B. R. Euliss. 2003. Brown-headed Cowbirds in grasslands: their habitats, hosts, and response to management. *Prairie Naturalist* 35: 145-186. [also at <http://www.npwrc.usgs.gov/resource/literatr/grasbird/bhco/bhco.htm> (Version 28MAY2004).]
- Shambaugh, N. 1987. The nesting ecology of the Townsend's Solitaire (*Myadestes townsendi*). M.A. thesis, University of Montana, Missoula, MT.
- Sharpe, C. L. 2003. Shiny Cowbird *Molothrus bonariensis venezuelensis* Stone 1891 as a successful brood parasite of Fulvous-headed Tanager *Thlypopsis fulviceps fulviceps* Cabanis 1851. *Memoria de la Sociedad de Ciencias Naturales La Salle* 61 (155): 139-141.
- Sick, H. 1985. Ornitologia Brasileira, uma introdução. Editora Universidade de Brasília, Brasília, Brazil.
- Sick, H. 1993. Birds in Brazil. A natural history. Princeton University Press, Princeton, NJ.
- Smith, G. A., and J. A. Jackson. 2002. Gray Kingbird (*Tyrannus dominicensis*). In *Birds of North America*, No. 668 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA.
- Smith, P. W., and A. Sprunt IV. 1987. The Shiny Cowbird reaches the U.S. *American Birds* 41: 370-371.
- Sovrano, L. V., P. F. Olguín, S. A. Regner, A. H. Geltzer and A. R. Giraudo. 2026. Breeding biology and parental care of the Unicolored Blackbird (*Agelasticus cyanopus*). *Wilson Journal of Ornithology* 138: 465-479.
- Stevenson, H. M., and B. H. Anderson. 1994. The birdlife of Florida. University of Florida Press, Gainesville, FL.
- Steward, B. G., W. A. Carter and J. D. Tyler. 1988. Third known nest of the Slaty Vireo, *Vireo brevipennis* (Vireonidae), in Colima, Mexico. *Southwestern Naturalist* 33: 252-253.
- Strausberger, B. M., and M. V. Ashley. 2005. Host use strategies of individual female Brown-headed Cowbirds *Molothrus ater* in a diverse avian community. *Journal of Avian Biology* 36: 313-321.
- Studer, A., and J. Viellard. 1988. Premières données étho-écologiques sur l'Ictéridé brésilien *Curaeus forbesi* (Sclater, 1886)(Aves, Passeriformes). *Revue suisse de Zoologie* 95: 1063-1077.
- Svedarsky, W. D. 1979. Spring and summer ecology of female Greater Prairie-Chickens in northwestern Minnesota. Ph.D. dissertation, University of North Dakota, Grand Forks, ND.
- Sykes, P. W., Jr., and W. Post. 2001. First specimen and evidence of breeding by the Shiny Cowbird in Georgia. *Oriole* 66: 45-51.
- Terrill, L. M. 1961. Cowbird hosts in southern Quebec. *Canadian Field-Naturalist* 75: 2-11.
- Truan, M. A. 2003. The Western Bluebird as host for the Brown-headed Cowbird: a new record from California. *Western Birds* 34: 111-113.
- Unitt, P. 1984. The birds of San Diego County. San Diego Society of Natural History, Memoir 13.
- Unitt, P. 2002. San Diego County Bird Atlas. San Diego Natural History Museum, San Diego, CA. <http://www.sdnhm.org/research/birdatlas/index.html>
- Unitt, P. 2004. San Diego County bird atlas. *Proceedings of the San Diego Society of Natural History*, No. 39.
- VanderWerf, E., M. Dalaton and R. Kohley. 2017. eBird checklist S38651996. <https://ebird.org/checklist/S38651996>
- Vega Rivera, J. H., F. Alverado, T. Valdivia and J. Rappole. 2004. First report of cowbird parasitism on the Black-capped Gnatcatcher in western Mexico. *Southwestern Naturalist* 49: 277-278.
- Velázquez-Tibatá, J. I., A. Gutiérrez and E. Carrillo. 2000. Primer registro de parasitismo reproductivo del Cucarachero de Pantano *Cistothorus apolinari* por el Chamón Maicero *Molothrus bonariensis*. *Cotinga* 14: 102-103.
- Villa, J., and R. D. Ruiz-Correa. 2021. First record of Giant Cowbird *Molothrus oryzivorus* brood parasitism on the cooperative breeder Red-billied Grackle *Hypopyrrhus pyrohypogaster*. *Cotinga* 43: 81-85.
- Walkinshaw, L. H. 1949. Twenty-five eggs apparently laid by a cowbird. *Wilson Bulletin* 61: 82-85.
- Webb, E. A., and C. E. Bock. 1996. Botteri's Sparrow (*Aimophila botterii*). In *Birds of North America*, No. 216 (A. Poole and F. Gill, eds.). Philadelphia: Academy of Natural Sciences; Washington, DC: American Ornithologists' Union.
- Welford, M., A. Vásquez, P. Sambrano, T. Nunnery and B. Ulman. 2007. Evidence for Giant Cowbird *Molothrus oryzivorus* brood parasitism of Turquoise Jays *Cyanolyca turcosa* in north-west

- Ecuador, and how this alters our understanding of cowbird brood parasitism. *Cotinga* 27: 58-60.
- White, D. J., L. Ho, G. de los Santos and I. Godoy. 2007. An experimental test of preferences for nest contents in an obligate brood parasite, *Molothrus ater*. *Behavioral Ecology* 18: 922-928.
- White, D. J., L. Ho and G. Freed-Brown. 2009. Counting chicks before they hatch. Female cowbirds can time readiness of a host nest for parasitism. *Psychological Science* 20: 1140-1145.
- Wiens, T., 1994. The summer season 1 June to 31 July 1993. *Loon* 66: 15-33.
- Wiley, R. H., and M. S. Wiley. 1980. Spacing and timing in the nesting ecology of a tropical blackbird: Comparison of populations in different environments. *Ecological Monographs* 50: 153-178.
- Withgott, J. H., and K. G. Smith. 1998. Brown-headed Nuthatch (*Sitta pusilla*). In *Birds of North America*, No. 349 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA.
- Wood, P. 1987. Report of the 1986 University of East Anglia Martinique Oriole Expedition. International Council for Bird Preservation, Study Report 23.
- Woodward, P. W., and J. C. Woodward. 1979. Brown-headed Cowbird parasitism on Eastern Bluebirds. *Wilson Bulletin* 91: 321-322.

Note: Web versions of the **Birds of North America** accounts (managed by Cornell Laboratory of Ornithology, Ithaca, NY) have been subsumed by **Birds of the World** (S. M. Billerman, B. K. Keeney, P. G. Rodewald, and T. S. Schulenberg, Editors). Cornell Laboratory of Ornithology, Ithaca, NY, USA. <https://birdsoftheworld.org/bow/home> in 2020.

TAXONOMIC NOTES:

The form *Psarocolius angustifrons alfredi* sometimes treated as separate species (Jaramillo and Burke 1999, who report that this taxon is also a host of the Giant Cowbird).

All host records of parasitism by Bronzed Cowbird of *Atlapetes gutturalis* are from Costa Rica. *Atlapetes gutturalis* sometimes considered conspecific with *Atlapetes albinucha* of Mexico. Host taxa listed as *Atlapetes gutturalis parvirostris* in Friedmann (1963) and as *Atlapetes albinucha parvirostris* and *Atlapetes albinucha brunnescens* in Friedmann and Kiff (1985).

Sturnella, here, includes both *Leistes* and *Pezites*; if *Leistes* retained as distinct from *Sturnella*, then taxon known here as *Sturnella militaris* becomes *Leistes militaris* and *Sturnella defilippi* (formerly treated as *Pezites militaris*) becomes *Sturnella militaris*.

Poospiza cabanisi has usually been treated as subspecies of *Poospiza lateralis* – and was treated as such in Friedmann and Kiff 1985 – but see Assis et al. (2007) and Remsen et al. (2009).

Assis, C. P., M. A. Raposo & R. Parrini. 2007. Validação de *Poospiza cabanisi* Bonaparte, 1850 (Passeriformes: Emberizidae). *Revista Brasileira de Ornitologia* 15(1): 103-112.

Remsen, J. V., Jr., C. D. Cadena, A. Jaramillo, M. Nores, J. F. Pacheco, M. B. Robbins, T. S. Schulenberg, F. G. Stiles, D. F. Stotz, and K. J. Zimmer. Version 20 Oct 2009. A classification of the bird species of South America. American Ornithologists' Union. <http://www.museum.lsu.edu/~Remsen/SACCBaseline.html>

NOTES:

- These supposed hosts of Screaming Cowbird (and initial references) are Chalk-browed Mockingbird *Mimus saturninus* and Yellow-winged Blackbird *Agelaius thilius* (Grant 1912); Rufous Hornero *Furnarius rufus*, Great Antshrike *Taraba major*, Great Kiskadee *Pitangus sulphuratus*, Rufous-bellied Thrush *Turdus rufiventris*, and Saffron Finch *Sicalis flaveola [pelzelni]* (Pereyra 1938). Friedmann (1963) indicated these species were thought hosts of Screaming Cowbird because of misidentified Shiny Cowbird *Molothrus bonariensis* eggs; both Mason (1985) and Fraga (1986) concur with this opinion. Those egg sets reported by Pereyra as documenting Screaming Cowbird parasitism were examined by Fraga (1986) who found only 1 of the 12 records apparently correct. This possibly correctly identified host is of a Rufous Hornero *Furnarius rufus* set taken 28 Nov 1931 at Manchala, Tucuman, Argentina, by P. Girard and consists of 2 host eggs and 1 "Screaming Cowbird" egg.
Red-fronted Thornbird *Phacellodomus rufifrons* listed as host in Ortega (1998); she cited Hoy and Ottow (1964) as her source, apparently on basis of their seemingly clear statement that: "Screaming Cowbird. *Molothrus rufo-axillaris*. -- ... frequently parasitizes the large, clearly visible nests of the Red-fronted Thorn-bird *Phacellodomus rufifrons*. (p. 190)" The meaning here, I believe, was that Screaming Cowbirds parasitized Grayish Baywings nesting in the nests of the thornbird. Throughout Hoy and Ottow's paper, Screaming Cowbirds were treated as a specialist brood parasite that parasitized only Grayish Baywings, as Screaming Cowbirds were known at the time.
- Two species best treated as accidental victims of the Screaming Cowbird (Di Giacomo et al. 2010): a) one nest of Solitary Cacique, *Cacicus solitarius*, which had been investigated by Bay-winged Cowbirds, received 1 Screaming Cowbird egg after caciques had abandoned the nest without laying any eggs; Bay-winged Cowbirds (an usual host for Screaming Cowbirds) do sometimes usurp cacique nests. This egg was of H5 haplotype which had been limited to

cowbirds parasitizing Chopti Blackbirds. b) one nest of Cattle Tyrant, *Machetornis rixosus* -- located < 1 m from an active Chopti Blackbird nest which had been parasitized -- received 3 Screaming Cowbird eggs; 1 of these eggs hatched, but the young died; 1 of the unhatched eggs was H1 haplotype (which has been known in both 18 Bay-wing and 7 Chopti Blackbird nests).

3. Western Meadowlark *Sturnella neglecta* listed, in error, as host in Lowther (1995).
4. Association of new victims and hosts of the Bronzed Cowbird with specific reference:
 Bowers and Dunning (1984, 1994), one observation of " ... female Bronzed Cowbird seen attempting to sit on a nest [of Buff-breasted Flycatcher *Empidonax fulvifrons*], but unsuccessful ... [in laying egg in nest "
Steward et al. (1988), Slaty Vireo *Vireo brevipennis*;
Clotfelter and Brush (1995), Yellow-billed Cuckoo *Coccyzus americanus* and Western Kingbird *Tyrannus verticalis*;
Chace (1997), Hutton's Vireo, *Vireo huttoni*, Western Tanager *Piranga ludoviciana*;
Russell and Monson (1998), Bell's Vireo *Vireo bellii* and Black-tailed Gnatcatcher *Poliophtila melanura*;
Sealy et al. (1997), House Wren *Troglodytes aedon*, Olive-crowned Yellowthroat *Geothlypis semiflava*, Gray-crowned Yellowthroat *Geothlypis poliocephala*, Rufous-capped Warbler *Basileuterus rufifrons*, White-lined Tanager *Tachyphonus rufus*, Buff-throated Saltator *Saltator maximus*, Black-striped Sparrow *Arremonops conirostris* and Spot-breasted Oriole *Icterus pectoralis*;
Brush (1998; see also Hathcock 2000): Altamira Oriole *Icterus gularis*;
Russell and Monson (1998), in their Bronzed Cowbird account, listed 6 species, with no other detail, in whose nests eggs or young of Bronzed Cowbirds had been noted: Black-tailed Gnatcatcher *Poliophtila melanura*, Sinaloa Wren *Thryophilus sinaloa*, Bell's Vireo *Vireo bellii*, Hooded Oriole *Icterus cucullatus*, Scott's Oriole *Icterus parisorum*, and Streaked-backed Oriole *Icterus pustulatus*.
J. F. Chace in Gardali and Ballard (2000) report out-of-nest young cowbird fed by Western Warbling-Vireo *Vireo swaubsibu*.
Marshall and Stoleson (2000), adds Willow Flycatcher *Empidonax traillii* as possible victim with no details
Flood (2002) adds Scott's Oriole *Icterus parisorum* as host.
Rothstein et al. (2003) mentions reports of 2 possible records of Willow Flycatcher *Empidonax traillii* as victim
Corman and Wise-Gervais (2005) add Lucy's Warbler *Oreothlypis luciae* and Yellow Warbler *Setophaga petechia* (*aestiva* group) as victims.
Peer et al. (2005) report Great-tailed Grackle *Quiscalus mexicanus* as new victim based on egg in grackle nest in collection of Western Foundation of Vertebrate Zoology.
Ellison et al. (2006) and Ellison et al. (2007) list Pyrrhuloxia *Cardinalis sinuatus* as host.
K. Ellison (pers. comm.; see also Ellison et al. 2006, Ellison et al. 2007) list Chipping Sparrow *Spizella passerina* and House Finch *Haemorhous mexicanus* as new victims with no details.
González-García (2007) report Common Bush-Tanager *Chlorospingus ophthalmicus* as new host and report new host status for Rusty Sparrow, *Aimophila rufescens*
Salgado-Ortiz et al. (2008) report Yellow [Mangrove] Warbler *Setophaga petechia bryanti* as new victim (and likely host also); 24 of 283 nests parasitized but no specific mention of cowbird success included
 González-García et al. (2021) report Blue-gray Gnatcatcher (*Poliophtila caerulea*) as new host
 Fernández-Popo et al. (2021) report Golden-crowned Warbler (*Basileuterus culicivorus*) as new host

Not included in this host list is Brewer's Blackbird. Unitt (2004: 568) describes Brewer's Blackbird as "the only host of the Bronzed Cowbird known in San Diego County"; he reports breeding by Bronzed Cowbird evident by independent juvenile in 2001 and "... The only previous confirmation of the species' reproducing in the county was the juvenile seen with Brewer's Blackbirds at Jacumba (U28) 13 July 1974 (J. L. Dunn)." (See Unitt 1984, 2002 below).

Unitt (2002) reported Brewer's Blackbird *Euphagus cyanocephalus* as a host of Bronzed Cowbird, but the basis of this statement was an observation of a juvenal cowbird -- age unknown -- accompanying flock -- unknown size -- of this species (see Unitt 1984). While possible that Brewer's Blackbird has served as a host, appearance of young cowbird with "flock" of blackbirds may actually indicate post-breeding flocking behavior of cowbirds with other icterids rather than an association indicating host adults and their recently reared cowbird young.

Unitt (2002): "Still just one breeding record [of Bronzed Cowbird], parasitizing Brewer's Blackbird at Jacumba [in San Diego Co., CA.] in 1974. One or two trapped in Borrego Springs area in 1990. Parasitism of orioles or blackbirds in Borrego Valley perhaps most likely prospect for further breeding in county."

Unitt (1984: 230): "A juvenal [Bronzed Cowbird] was accompanying a flock of Brewer's Blackbirds on 13 July 1974 (J. Dunn)."

Not included in this host list are possible additional victims suggested by Forcey 2002b. Forcey (2002b) gives list of 5 species as "successful" hosts and list of 8 species for which "attempted parasitism" was noted; 5 of these 8 species may be new victims: Greater Pewee *Contopus pertinax*, Western Wood-Pewee *Contopus sordidulus*, Cassin's Kingbird *Tyrannus vociferans*, American Robin *Turdus migratorius* and Gray Silky-Flycatcher *Ptilonogys cinereus*. Specific details not given; no indication that this list based on observation of nest contents. Only "(1)" appears apparently to indicate that "attempted parasitism" was noted at 1 nest for each of these 8 species. Species accounts for Western Wood-Pewee (see Forcey 2002a) and American Robin (see Forcey 2002b) noted that these species were observed (1 time each) to chase Bronzed Cowbirds; accounts of other species mention neither cowbirds nor brood parasitism. Species accounts of all 5 "successful" hosts mention, only, that host species observed "attending" out-of-nest cowbird young. Forcey's reply

to query: "Your interpretation of my article is correct. Adult birds feeding young Cowbirds out of the nest was considered **successful parasitism**, and Cowbirds at or near an active nest, though not seen entering the nest, was considered as **attempted parasitism**."

Forcey, J. M. 2002a. Notes on the birds of central Oaxaca, part II: Columbidae to Vireonidae. Huitzil 3: 14-27.
www.huitzil.net.

Forcey, J. M. 2002b. Notes on the birds of central Oaxaca, part III: Hirundinidae to Fringillidae. Huitzil 3: 43-55.
www.huitzil.net.

5. Fraga (2002; R. M. Fraga pers. comm.) notes that 2 species in the host list given by Friedmann et al. (1977) included in error: Cock-tailed Tyrant *Alectrurus tricolor* and Crested Oropendola *Psarocolius decumanus*.

The single record of Cock-tailed Tyrant is based on a putative parasitized clutch of this flycatcher collected around 1910 in Tucumán, Argentina, and housed in the National Museum of Natural History in Paris. But this flycatcher has never been reported from Tucumán (see Olrog 1979), not even at the time when the clutch was collected (Lillo 1902). The putative parasitized clutch of Crested Oropendola in the Museo de La Plata, Argentina, collected in Tucumán, Argentina, is misidentified and clearly belonged to the Epaulet Oriole *Icterus cayenensis* (Fraga 2002); in addition, Crested Oropendolas have never been reported from Tucumán (Olrog 1979).

6. Association of new hosts and victims of Shiny Cowbird with specific references:
Dinelli (1918; see also Fraga 2005): Brown-backed Mockingbird *Mimus dorsalis*;
Marchant (1960; see also Gochfeld 1979: 863): Peruvian Meadowlark *Sturnella bellicosa*
Boggs (1961): Orange-crowned Oriole *Icterus auricapillus*;
Wiley and Wiley (1980): Yellow-hooded Blackbird *Chrysomus icterocephalus*;
Salvador (1983): Grayish Baywing *Agelaioides badius*;
Salvador and Narosky (1983): Rufous-naped Ground-Tyrant *Muscisaxicola rufivertex*;
Salvador and Salvador (1984): Sharp-billed Canastero *Asthenes pyrrholeuca*, Variable Antshrike *Thamnophilus caeruleus*, Pied Water-Tyrant *Fluvicola pica*, Black-capped Warbling-Finch *Poospiza melanoleuca*;
Cruz et al. (1985): Puerto Rico Flycatcher *Myiarchus antillarum*, Red-legged Thrush *Turdus plumbeus*, Northern Mockingbird *Mimus polyglottos*, Palm Chat *Dulus dominicensis*, Black-whiskered Vireo *Vireo altiloquus*, Greater Antillean Grackle *Quiscalus niger*, Puerto Rican Oriole *Icterus portoricensis*, Troupial *Icterus icterus*, Village Weaver *Ploceus cucullatus*, Nutmeg Mannikin *Lochura punctulata*;
Sick (1985): Guira Tanager *Hemithraupis guira*, Ruby-crowned Tanager *Tachyphonus oronatus*;
Beltzer (1986): Solitary Cacicque *Cacicus solitarius*;
Mason (1986a): Yellow-winged Blackbird *Agelasticus thilius*;
Mason (1986b): White-browed Blackbird *Sturnella supercilialis*;
Pérez-Rivera (1986): Zenaida Dove *Zenaida aurita*, Common Ground-Dove *Columbina passerina*, Black-faced Grassquit *Tiaris bicolor*;
Wood (1987): Martinique Oriole *Icterus bonana*;
Cavalcanti and Pimentel (1988): White-banded Tanager *Neothraupis fasciata*, Palm Tanager *Thraupis palmarum*. White-rumped Tanager *Cypsnagra hirundinacea*;
Studer and Viellard (1988): Forbes's Blackbird *Curaeus forbesi*;
Cruz et al. (1989): Caribbean Elaenia *Elaenia martinica*, Puerto Rican Vireo *Vireo latimeri*, Adelaide's Warbler *Setophaga adelaidae*, Puerto Rican Bullfinch *Loxigilla portoricensis*;
Post et al. (1990): Caribbean Elaenia *Elaenia martinica*, Puerto Rico Flycatcher *Myiarchus antillarum*, Lesser Antillean Flycatcher *Myiarchus oberi*, St. Lucia Oriole *Icterus laudabilis*;
Debrot and Prins (1992): Yellow Oriole, *Icterus nigrogularis*;
Sick (1993): Masked Water-Tyrant *Fluvicola nengeta*, Chopti Blackbird, *Gnorimopsar chopi*;
Mermoz and Reboreda (1994): Brown-and-Yellow Marshbird *Pseudoleistes virescens*;
Nores and Nores (1994): Brown Cacholote, *Pseudoseisura lophotes*;
Stevenson and Anderson (1994): Red-winged Blackbird *Agelaius phoeniceus* as possible or probable host. This species very probably is now, or will be soon, a host of the Shiny Cowbird in Florida. No indisputable record yet exists, but suggestive observation in 1991 offered first speculation. "A fledgling cowbird fed by a Red-winged Blackbird, near Homestead (s Dade Co.), 1991, was believed to be (because of the host species) a Shiny [Cowbird] (B. [= Bill] Pranty in litt.). [Stevenson and Anderson 1994: 679]." and "... Apparently becoming resident in southern Dade Co., where a Red-winged Blackbird was seen to feed a fledgling M. bonariensis in 1991 (H. W. Kale, II, C. A. Miles, M. C. Wheeler in litt.). [Robertson and Woolfenden 1992: 146];
Cruz and Andrews (1997): Pied Water-Tyrant *Fluvicola pica*;
Baltz (1996): Bahama Oriole, *Icterus northropi*;
Kattan (1997: 648) gives casual mention of 4 species of "occasional hosts recorded outside the study area [of House Wren - Shiny Cowbird interactions]" including 3 "new" hosts -- Black-billed Thrush *Turdus ignobilis*, Crimson-backed Tanager *Ramphocelus dimidiatus*, Scrub Tanager *Tangara vitriolina*;
Di Giacomo (1995): Barred Antshrike *Thamnophilus doliatus*;
Fraga et al. (1998): Saffron-cowled Blackbird *Xanthopsar flavus* as host;
Raffaele et al. (1998) listed Jamaican Oriole *Icterus leucopteryx* as first known host on Jamaica.
López Lanús et al. (1999): Straight-billed Reedhaunter *Limnortyx rectirostris*;
A. Azpiroz in BirdLife International (2000): Black-and-White Monjita *Xolmis dominicanus*;
Marín (2000): *Xolmis pyrope*, *Elaenia albiceps* and *Mimus thenca* added as hosts;

Velázquez-Tibatá et al. (2000): Apolinar's Wren *Cistothorus apolinari* added as host;
Rochido (2001a): *Knipolegus nigerrimus* added as hosts;
Rochido (2001b): *Hirundinea ferruginea* added as victim;
Fraga (2002, R. M. Fraga pers. comm.) adds observations of host status for several species: Pale-breasted Thrush *Turdus leucomelas*, Red-crested Finch *Coryphospingus cucullatus*, White-browed Blackbird *Sturnella supercilialis*; and a certain host record for Masked Gnatcatcher, *Poliophtila dumicola*, for which previous information of host status was doubtful;
Sharpe (2003, C. L. Sharpe pers. comm.): Fulvous-headed Tanager *Thlypopsis fulviceps* as host;
Oppel et al. (2003): Pale-headed Brush-Finch *Atlapetes pallidiceps* added as host.
Latta et al. (2006): Hispaniolan Oriole *Icterus dominicensis* added as victim ("parasitism has been confirmed", p. 209).
Bodrati and Fraga (2010): Golden-winged Cacique *Cacicus chrysopterus* as host
Gomes and Rodrigues (2010): Cipó Canastero *Asthenes luizae* as host
Mauricio (2011, G. N. Mauricio pers. comm.): Orange-breasted Thornbird *Phacellodomus ferrugineigula* as host
Salvador (2012): see below
Lopes et al. (2013): Hooded Tanager *Nemosia pileata* added as victim.
Costa (2013): Pale-throated Pampa-Finch *Embernagra longicauda* as host
VanderWert et al. (2017): White-naped Brushfinch (Yellow-throated) *Atlapetes albinucha* added as host
H. F. Greeney pers. comm, Greeney 2018: Black-capped Sparrow *Arremon abeillei* as victim.
D. Hinckley pers. comm. Brazilian Tanager *Ramphocelus bresilius* as host: <https://ebird.org/checklist/S79868262>
Miguel Ângelo Marini in his work on hosts and victims in Brazil provided guidance to taxa listed in Birds of the World (<https://species.birds.cornell.edu/bow/home>) as being parasitized by Shiny Cowbirds. Additions to the list represent taxa sometimes considered conspecific (i.e., *Fluvicola pica* and *Fluvicola albiventer*; *Icterus pyrrhopterus*, *Icterus cayanensis* and *Icterus chrysiocephalus*; see Fraga and de Juana 2020) or are new to the list Black-and-white Tanager *Conothraupis speculigera* added with no specific details (Hilty and de Juana 2020).
Molina (2022): Yellow-tailed Oriole *Icterus mesomelas* added as host
Hargis and Fedders (2022): Southern House Wren *Troglodytes musculus* added as host
Guillermo León Padierna Padierna pers. comm. West Peruvian Dove *Zenaida meloda* added as victim and possible host
Molina Abril et al. (2024): Grey-browed Brush-finch *Arremon assimilis* and Golden Grosbeak *Pheucticus chrysogaster* added as new hosts; Thrush-like Wren *Campylorhynchus turdinus* and Tropical Mockingbird *Mimus gilvus* added as hosts
Marini et al. (2025): Barbados Bullfinch *Loxigilla barbadensis*, Peruvian Pipit *Anthus peruvianus* and Red-cowled Cardinal *Paroaria dominicana* added as victims; Piratic Flycatcher *Legatus leucophais* may also be a victim
Salvador and Borati (2014) reviews victims and hosts in Argentina adding 19 new species to the list as victims and 22 species identified as hosts
Sovrano et al (2026) Unicolored Blackbird *Agelasticus cyanopus* added as host (see also Salvador and Borati (2014)

Salvador (2012) provides a comprehensive list of 141 species (157 species and subspecies) serving as victims and hosts from Argentina and includes 13 species new to the host list for the Shiny Cowbird. New species and reference sources are listed below. N = parasitized nests found; AP = adults feeding young; ? = uncertain observation. [N = hallazgos de nidos parasitados; AP = observaciones de adultos alimentando pichones; ? = para cuando el dato no es claro.]

Dark-billed Cuckoo, *Coccyzus melacoryphus*: N -- Salvador and Bodrati (2011).
 Guira Cuckoo, *Guira guira*: N -- de la Peña (2005a).
 Olog's Cinclodes, *Cinclodes ologi*: ? -- Miatello et al. (1999).
 White-winged Cinclodes, *Cinclodes atacamensis schocolatinus*: ? -- Miatello et al. (1999).
 Tufted Tit-Spinetail, *Leptasthenura platensis*: N -- Salvador (2011).
 Sulphur-beared Spinetail, *Craniolaema sulphurifera*: N -- Darrieu et al. (1988).
 Small-billed Elaenia, *Elaenia parvirostris*: N -- Narosky en Narosky y Salvador (1998), Salvador (2011).
 Grey-bellied Shrike-Tyrant, *Agriornis micropterus micropterus*: N -- Narosky and Yzurieta in Narosky and Salvador (1998).
 Swainson's Flycatcher, *Myiarchus swainsoni ferocior*: AP -- S. Salvador (obs. per.).
 Austral Thrush, *Turdus falcklandii magellanicus*: N -- S. Salvador (obs. per.).
 Black-hooded Sierra-Finch, *Phrygilus atriceps*: N -- Salvador and Bodrati (2011).
 Ash-breasted Sierra-Finch, *Phrygilus plebejus naroskyi*: N -- Salvador and Bodrati (2011).
 Band-tailed Seedeater, *Catamenia analis analis*: N -- de la Peña (2001).

Darrieu, C. A., G. Soave and E. Soave. 1988. Nidificación de passeriformes en la reserva integral de Punta Lara y sus alrededores, Buenos Aires, Argentina. Hornero 13: 53-58.
 de la Peña, M. R. 2001. Nidificación de algunas especies de aves en el este de la provincia de Catamarca, Argentina. Hornero 16: 17-21.
 de la Peña, M. R. 2005a. Reproducción de las aves argentinas (con descripción de pichones). Ed. LOLA, Buenos Aires, Argentina.
 Miatello, R., J. Baldo, M. Ordano, C. Rosacher and L. Biancucci. 1999. Avifauna del Parque Nacional Quebrada del Condorito y Reserva Hídrica Provincial de Achala, Córdoba, Argentina. Sec. Agric. Gan. Rec. Ren. Córdoba.
 Narosky, T., and S. Salvador. 1998. Nidificación de las Aves Argentinas (Tyrannidae). Asociación Ornitológica del

- Plata. Buenos Aires, Argentina.
- Salvador, S. A. 2011. Parasitismo de cría del Renegrido (*Molothrus bonariensis*) en el departamento General San Martín, Córdoba, Argentina. *Biológica* 14: 49-51.
- Salvador, S. A., and A. Bodrati. 2011. Nuevas víctimas del Tordo Renegrido (*Molothrus bonariensis bonariensis*), hallados en Argentina. *Nuestra Aves* 56: 38-39.
7. Female collected 7 Jul 2000, McIntosh Co., GA, with 3 unshelled eggs in oviduct, largest 8.1 mm diameter.
 8. Association of new hosts and victims of Brown-headed Cowbird with specific references:

Carlson (1943), Ring-necked Pheasant *Phasianus colchicus* added as victim (egg in a "dump" nest);

Terrill (1961), Least Flycatcher *Empidonax minimus* added as host;

Bailey and Niedrach (1965), Rock Wren *Salpinctes obsoletus* added as host;

Svedarsky (1979); see also Shaffer et al. 2003), Greater Prairie-Chicken *Tympanuchus cupido* added as victim;

Woodward and Woodward (1979), Eastern Bluebird *Sialia sialis* added as host;

Dolan and Wright (1984), Cordilleran Flycatcher *Empidonax occidentalis* added as victim; however, this taxon has been returned to its former status along with Pacific-sloped Flycatcher *Empidonax difficilis*, as subspecies of Western Flycatcher *Empidonax difficilis* and both subspecies having been known as victims.

Laubach (1984), Western Meadowlark *Sturnella neglecta* added as host;

Miles (1986), Rufous-crowned Sparrow *Aimophila ruficeps* added as host;

Picman (1986), Marsh Wren *Cistothorus palustris* added as victim;

Shambaugh (1987, see also Bowen 1997), Townsend's Solitaire *Myadestes townsendi* added as host;

Gaines (1988), Gray-crowned Rosy-Finch, *Leucosticte tephrocotis*;

Paul (1989), Black-whiskered Vireo *Vireo altiloquus*;

De Geus and Best (1991), Loggerhead Shrike *Lanius ludovicianus*;

Martin and Barber (1995), Red-faced Warbler *Cardellina rubrifrons* added as victim, this species noted as host by **Corman and Wise-Gervais (2005)**;

Chace and Cruz (1996), Cordilleran Flycatcher *Empidonax difficilis occidentalis*, Gray Vireo *Vireo vicinior*, Mountain Chickadee *Poecile gambeli*, Mountain Bluebird *Sialia currucoides*, and Green-tailed Towhee *Pipilo chlorurus* added as hosts;

Webb and Bock (1996), Botteri's Sparrow *Peucaea botterii* added as victim;

Campbell et al. (1997), Swainson's Thrush *Catharus ustulatus*, added as host, Varied Thrush *Ixoreus naevius* added as victim;

Brush (1998), Altamira Oriole *Icterus gularis*, added as victim;

Davis and Sealy (1998), Baird's Sparrow *Centronyx bairdii*, added as host;

Groschupf and Thompson (1998), Varied Bunting *Passerina versicolor* added as host;

Withgott and Smith (1998), Brown-headed Nuthatch *Sitta pusilla* added as victim;

Ellison (1999), Bell's Sparrow, *Artemisiospiza belli* added as victim;

Davis and Sealy (2000), Sprague's Pipit *Anthus spragueii* added as host;

Koons (2000) added Lesser Scaup *Aythya affinis* as victim;

Campbell et al. (2001), Bushtit *Psaltiriparus minimus*, Cape May Warbler *Setophaga tigrina*, Black-headed Grosbeak *Pheucticus melanocephalus* added as hosts and Cassin's Finch *Haemorhous cassinii* added as victim;

Herkert et al. (2001), Sedge Wren *Cistothorus platensis* added as host [see also Wiens 1994];

Johnson et al. (2002) added Black-throated Sparrow *Amphispiza bilineata* as host;

Smith and Jackson (2002) cite undocumented report from M. Oberle of Gray Kingbird *Tyrannus dominicensis* as host: 2 Gray Kingbirds seen feeding 2 young Brown-headed Cowbirds on Jekyll Is., GA;

Truan (2003) added Western Bluebird *Sialia mexicana* as host;

Mollhoff (2004) added Lark Bunting *Calamospiza melanocorys* as host; (also Sealy 1999)

Vega Rivera et al. (2004) added Black-capped Gnatcatcher *Polioptila nigriceps* as host.

Corman and Wise-Gervais (2005) added Olive Warbler *Peucedramus taeniatus* as host based on report of adult feeding out-of-nest cowbird; for a second record, Matt Baumann (in litt., 3 Aug 2020) included photo of female feeding out-of-nest cowbird in eBird list: <https://ebird.org/checklist/S72049047>

Nordhagen et al. (2005) adds definite host record of Nelson's Sparrow *Ammospiza nelsoni* to the hypothetical record provided by Friedmann (1963)

Reetz et al. (2008) added Bachman's Sparrow *Peucaea aestivalis* as host

Ellison and Gagliardi (2008); also **C. Gagliardi pers. comm.** (via K. S. Ellison) added Hooded Merganser *Lophodytes cucullatus* as victim

Russell et al. (2023) added Black Phoebe *Sayornis nigricans* as host

Ingebritson (2026) added White-breasted Nuthatch *Sitta carolinensis* as possible host
 9. Reference suggesting Mourning Dove to have reared cowbird – Kellogg 1900 – is summarized as follows: On 25 May 1899, at Rock Hill, PA, C. D. Kellogg noticed cowbird leave Common Grackle nest, which was found to contain 1 cowbird egg; on 28 May, the nest contained, in addition, 2 Mourning Dove eggs. Three weeks later, the nest contained a young cowbird almost ready to fly with the 2 unhatched dove eggs. No adult host was seen to feed the cowbird.

Single, circumstantial report by Friedmann (1963) of Purple Martin as victim not considered credible (Brown 1997).

The lists in Friedmann and Kiff (1985) include species of *Spinus* and *Coccothraustes* as having reared cowbird young, but there is skepticism of these "host" reports appropriate since host young fed seed diet which has been found generally

inadequate for young of Brown-headed Cowbird.

Pine Siskin *Spinus pinus*.—Friedmann (Friedmann 1963, Friedmann and Kiff 1985) provide 4 sources that suggest "host" status: (a) Dales and Bennett (1929) – observed nest in Iowa with 3 siskin eggs plus 1 cowbird egg; cowbird hatched either 22 May 1928 or 23 May; on 27 May only cowbird young remained in nest and "the young Cowbird seemed to thrive". (b) Swenk (1929) – describes Nebraska's fifth nesting record, 16 May 1915, involving 1 siskin in the nest, 1 cowbird on the ground underneath, and both young being fed by adults. (c) Rolfs et al. (1974) monitored siskin nesting in Kansas, monitoring 50 nests of which 28 parasitized and report that some cowbird young survived to age 5 days; Hill (1976) summarizes these same data and indicates 1 cowbird fledged but provides no details.

Lesser Goldfinch *Spinus psaltria*.—Included in list of species that have reared cowbird young in Friedmann and Kiff (1985). Only single record indicating "host" status presented in Friedmann et al. (1977) of observation by D. A. Schroeder in Ventura Co., CA, of cowbird hatching 21 or 22 May 1972 and "fledging" on 31 May; additional detail of observation indicates nest was not observed daily.

American Goldfinch *Spinus tristis*.—Only report of American Goldfinch as cowbird host from Dr Nathaniel Potter of Baltimore letter to Alexander Wilson (Friedmann and Kiff 1985): "I found a goldfinch's nest ... [with 1 goldfinch and 1 cowbird eggs] ... Being obliged to leave home ... but from my reckoning, ... cow bird must have been hatched in 9 or 10 days from the commencement of incubation. ... On my return, I found the young cow bird occupying nearly the whole nest and the foster mother as attentive to it as she could have been to her own."

Evening Grosbeak *Coccothraustes vespertinus*.—There are no records of cowbird young in the nest. Friedmann (1963) gives 2 references of a single instance of grosbeaks attending cowbird young: Nichols (1949: 231) briefly reports of "... and 1 pair [of Evening Grosbeaks] was seen feeding a young Cowbird (Meade)" about which Schaub (1951) expands the observation: On 2 Jul 1949, male grosbeak observed at feeder in New York with "much gray" young, on 7 Jul, the "gray" young was identified as a young cowbird "at least a week out of nest" and the male grosbeak seen to make 8 trips from feeder to the cowbird; on 11 Jul, the 2 birds were at the feeder again but the male showed less interest to the cowbird.

Note regarding Giant Cowbird parasitism of Green Oropendola

Green Oropendola reported as "common host" of Giant Cowbird and that young cowbirds have been successfully reared by this species (A. Jaramillo pers. obs. in Jaramillo and Burke 1999). Prior to this published confirmation as a host, the appearance of Green Oropendola in Friedmann's 1963 host list for Giant Cowbird was confusing. Friedmann provided no discussion, no documentation, and no supporting reference; its presence in Friedmann's host list at that time may have been in error (see W. Meise in Schönwetter 1981).

W. Meise (in Schönwetter 1981: 405) wrote: [. . . Die Wirtsliste erweiterte sich nur noch wenig. Sie sei hier historisch zusammengestellt (und umfaßt *Psarocolius viridis* nicht, der bei FRIEDMANN 1963, S. 219, darin steht, auch nicht die Rasse *Cacicus haemorrhous affinis*, für die ich Keinen Beleg finde): *Psarocolius decumanus* (1894 von GOELDI als Wirt entdeckt), *Cacicus haemorrhous haemorrhous* (von LLOYD, l. c., 1897, von GOELDI, Bull. [sic] Mus. Paraense 3, S. 205, 1902 hinzugefügt), *Cacicus cela* (1897 von KUSCHEL und LLOYD), *Psarocolius wagleri ridgwayi* (1914 von CRANDALL), *Psarocolius montezuma* (1914 von CRANDALL) und *Cyanocorax yncas* (1960 von LEHMANN, s. u., hinzugefügt), möglicherweise (siehe unten) auch *Psarocolius guatimozinus* und *P. angustifrons alfredi*. Hrsg.]

Translation: [. . . The host-list includes only a few species. It is presented here in full for historical reasons (and does not include *Psarocolius viridis*, that was listed by Friedmann 1963: 219, also does not include the race *Cacicus haemorrhous affinis*, for which I find no proof/documentation): *Psarocolius decumanus* (discovered as host by Goeldi 1894), *Cacicus haemorrhous haemorrhous* (Lloyd 1897, Goeldi 1902 [= Portuguese version of Goeldi 1897]), *Cacicus cela* (Kuschel 1897, Lloyd 1897), *Psarocolius wagleri ridgwayi* (Crandall 1914), *Psarocolius montezuma* (Crandall 1914) and *Cyanocorax yncas* (Lehmann 1960), probably also *Psarocolius guatimozinus* and *P. angustifrons alfredi*. W. Meise, editor]

Crandall, L. S. 1914. Notes on Costa Rica birds. Zoologica 1: 325-343

Goeldi, E. A. 1894. As Aves do Brasil. Livraria Classica de Alves & Co., Rio de Janeiro and San Paulo.

Goeldi, E. A. 1897. On the nesting of *Cassicus persicus*, *Cassidix oryzivora*, *Gymnomystax melanicterus*, and *Todirostrum maculatum*. Ibis, series 7, 3: 361-365.

Goeldi, E. A. 1901 [=1902]. Sobre a nidificação do *Cassicus persicus* (Japim), da *Cassidix oryzivora* (Grauna), do *Gymnomystax melanicterus* (Aritaná), e do *Todirostrum maculatus* (Ferreirinho). Boletim do Museu Paraense de Historia natural e ethnographia 3: 203-210.

Kuschel, M. 1897. Über die Fortpflanzung von *Cassidix oryzivora* Scl. Journal für Ornithologie. 45: 168-170.

Lloyd, C. A. 1897. Nesting of some Guiana birds. Timehri 11: 1-10. [reviewed in Ibis, ser. 8, vol. 4: 166, 1898.]