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Additional records of Lazuli Bunting (*Passerina amoena*) and first records of several wild-caught exotic birds for Cuba

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Abstract We report two Lazuli Buntings (*Passerina amoena*) captured in Cuba; these constitute the second and third records for the island and entire West Indies. We also report the first-time occurrence of several free-living exotic birds in Cuba, based on captures by local bird trappers: White-eared Bulbul (*Pycnonotus leucotis*), Red-faced Liocichla (*Liocichla phoenicea*), Red-billed Leiothrix (*Leiothrix lutea*), Crested Myna (*Acridotheres cristatellus*), Yellow-mantled Widowbird (*Euplectes macroura*), and White-winged Snowfinch (*Montifringilla nivalis*). We suggest possible sources and agents of transport for some of these species. Further, we alert the conservation community to potential risks, should any of these species become established.

Keywords cage bird, exotic, introduction, Lazuli Bunting, *Passerina amoena*

Resumen Registros adicionales de Mariposa Azul (*Passerina amoena*) y primeros registros de varias especies de aves exóticas capturadas en el medio silvestre para Cuba—Reportamos la presencia de dos individuos de Mariposa Azul (*Passerina amoena*) capturados en Cuba que constituyen el segundo y el tercer registro para Cuba y las Antillas. También reportamos la ocurrencia, por primera vez en Cuba, de varias especies de aves exóticas viviendo en el medio silvestre basados en las capturas de pajareros locales. Entre estas especies se encuentran: Bulbul de Orejas Blancas (*Pycnonotus leucotis*), Charlatán Carirojo (*Liocichla phoenicea*), Ruiseñor Japonés (*Leiothrix lutea*), Myna Crestado (*Acridotheres cristatellus*), Viuda Espalda Amarilla (*Euplectes macroura*) y Gorrión Alpino (*Montifringilla nivalis*). Sugerimos las posibles fuentes y agentes de transporte para algunas de estas especies y alertamos a la comunidad conservacionista de los riesgos potenciales del establecimiento de las mismas.

Palabras clave ave de jaula, exótico, introducción, Mariposa Azul, *Passerina amoena*

Résumé Nouvelles mentions de Passerin azuré (*Passerina amoena*) et premières mentions de plusieurs oiseaux exotiques capturés dans la nature à Cuba—Nous signalons deux Passerins azurés (*Passerina amoena*) capturés à Cuba. Il s'agit des deuxième et troisième mentions pour l'île et les Antilles entières. Nous signalons également la présence de plusieurs oiseaux exotiques en liberté à Cuba, sur la base de captures par des personnes capturant des oiseaux localement : Bulbul à oreillons blancs (*Pycnonotus leucotis*), Garrulaxe à ailes rouges (*Liocichla phoenicea*), Léiothrix jaune (*Leiothrix lutea*), Martin huppé (*Acridotheres cristatellus*), Euplecte à dos d'or (*Euplectes macroura*), et Niverolle alpine (*Montifringilla nivalis*). Nous suggérons d'éventuels sources et agents de transport pour certaines de ces espèces. De plus, nous alertons la communauté de la conservation des risques potentiels si l'une de ces espèces venait à s'établir.

Mots clés espèces exotiques, introduction, oiseaux élevés en cage, Passerin azuré, *Passerina amoena*

Wild bird harvesting for the cage bird trade is quite vigorous in Cuba. Species attractive to bird trappers (“pajareros”) include residents and migrants, but the most desirable species are those with showy plumages and good singing behavior in captivity. Along with the usual species harvested by pajareros, unusual and rare species are taken occasionally, including some that represent new records for the island and Caribbean region. Species

documented for the first time in Cuba through captures by local pajareros include Scaly-breasted Munia (*Lonchura punctulata*), Tricolored Munia (*L. malacca*), Chestnut Munia (*L. atricapilla*), Saffron Finch (*Sicalis flaveola*), and Blue-black Grassquit (*Volatinia jacarina*) (Garrido and García Montaña 1967, Kirkconnell and Garrido 1992, Garrido 1997, Rodríguez and Rabelo 1997, Rodríguez *et al.* 2003). Of those species, established breeding populations are known for Tricolored Munia, which is particularly abundant in the Zapata Peninsula (Garrido and Kirkconnell 2000). Here we report several recent observations of unusual passerine birds in Cuba based on observations and captures by local pajareros. Nomenclature follows the American Ornithologists' Union (AOU) Checklist (1998) and subsequent supplements,

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where appropriate. Otherwise, names are as presented by Dickinson (2003) or Gill and Donsker (2017).

Species Accounts

Pycnonotus leucotis (White-eared Bulbul; Family Pycnonotidae)

On 16 October 2013, a resident of La Habana Vieja (23°07'49"N, 82°21'11"W; ~1 m elevation above sea level [asl]) in Ciudad de La Habana Province, Cuba, hand-captured an adult male White-eared Bulbul that had landed on his balcony (Fig. 1). It is unknown whether the bird was tame or weak, although its "nervous" behavior suggested it had not been a caged bird previously. It was a singing male in definitive basic plumage when captured. The resident kept the bird in his home until YRC purchased it 3 months later. YRC noted that it was perhaps an old bird judging by the coarse and large tarsi scales and dry legs (Gedney 1879:215, England 1974).

White-eared Bulbul is widely distributed in West and South Asia, including Afghanistan, Iraq, Arabia, Iran, India, and Pakistan (Dickinson 2003). The species is considered by some (e.g., Dickinson 2003) as a subspecies of White-cheeked Bulbul (*P. leucogenys*), whereas others (e.g., Gill and Donsker 2017) treat it as a full species. The White-cheeked Bulbul/White-eared Bulbul complex has been reported as widely introduced in the Middle East, including Jordan, where breeding populations are established, likely from escaped cage birds imported from Iraq and Syria (Jennings 2004, Khoury et al. 2012). Neither White-eared nor White-cheeked Bulbul has been reported previously from Cuba or elsewhere in the Caribbean. This is the second known record of the family Pycnonotidae in the West Indies. Cruickshank (1966) reported observing an escaped Red-whiskered Bulbul (*P. jocosus*) in Jamaica from early May to mid-June 1966, which he learned had escaped from an aviary collection.

Red-vented Bulbul (*P. cafer*) and Red-whiskered Bulbul are popular cage birds. Both species have been introduced and are established in the Hawaiian Islands (Ehrlich et al. 1988:653, Islam and Williams 2000). An introduced population of Red-whiskered Bulbul is now established in Miami-Dade County, Florida (Islam and Williams 2000). Although White-eared Bulbul is a common cage bird in its native range and is imported to other countries for the bird trade, it is not a species commonly imported into the United States, where only a few putative "*Pycnonotus leucogenys*" (0–25 annually) were imported from 1968 to 1972 (Banks 1970, Banks and Clapp 1972, Clapp and Banks 1973a, 1973b, Clapp 1975). Nevertheless, the threat of escaped birds forming established populations in the West Indies is substantial given the establishment of the species elsewhere.

Liocichla phoenicea (Red-faced Liocichla; Family Timaliidae)

YRC purchased a Red-faced Liocichla from a pájarero, who said he captured it while trapping Indigo Buntings (*Passerina cyanea*) at km 54 on the Autopista Nacional (A-1) in Madruga (22°55'00"N, 81°51'00"W; ~175 m asl), east-central Mayabeque Province, Cuba. The bird, a female in definitive basic plumage when captured, was trapped in an area of small bushes on 23 October 2013 (Fig. 2). YRC believed it to be 2–3 yr old, and noted that when handled, its feathers were easily released from the body. YRC has since maintained the bird alive in his aviary.

Red-faced Liocichla is widely distributed in Asia, including Bangladesh, Bhutan, India, Laos, Myanmar, Nepal, Assam, Yunnan, Thailand, and Vietnam (Dickinson 2003). It has been introduced in Hong Kong, likely through cage bird escapes (Wai 2006). This species has been kept in captivity in the southeastern United States (Zombeck 2011), but has not been reported previously from Cuba or the Caribbean region. This record and that for Red-billed Leiothrix (*Leiothrix lutea*; see below) are the first

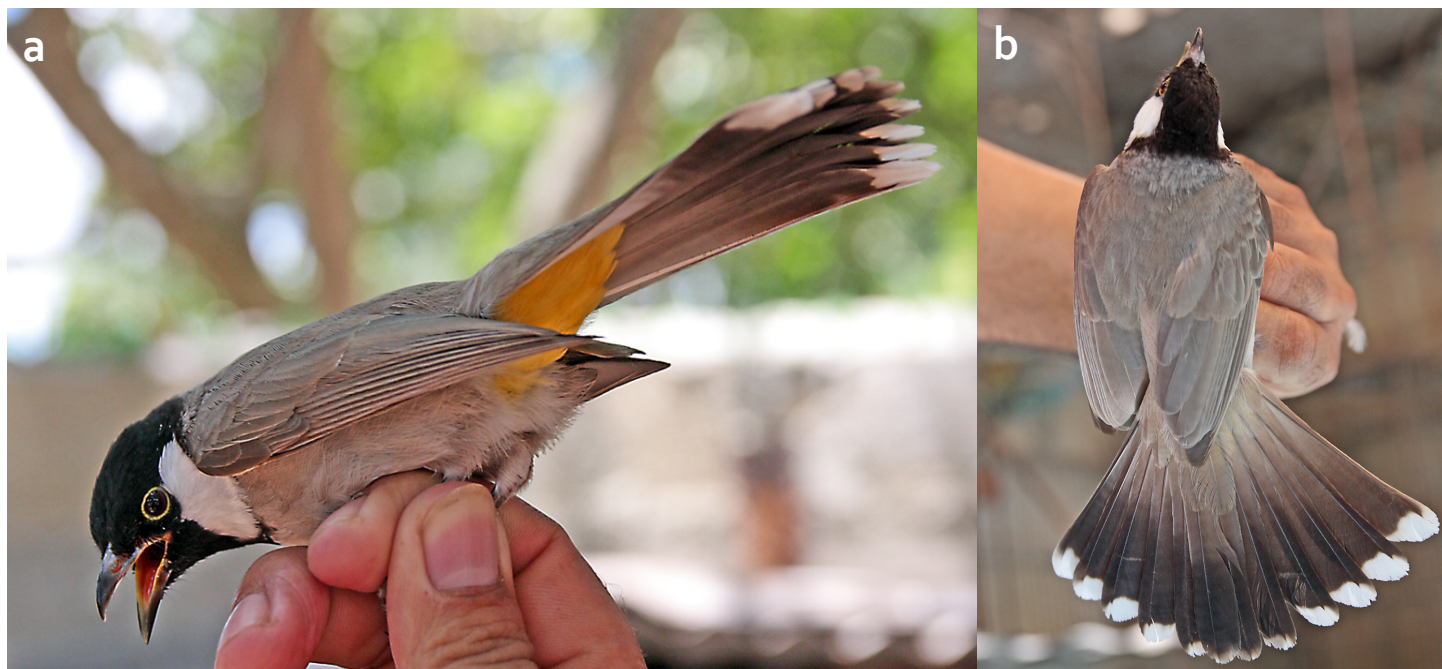


Fig. 1. Male White-eared Bulbul in definitive basic plumage captured in La Habana Vieja (Old Havana), Ciudad de La Habana Province, Cuba, on 16 October 2013: (a) side view and (b) dorsal view. Photographs by James W. Wiley.



Fig. 2. Adult female Red-faced Liocichla in definitive basic plumage captured by a pájarero at km 54 on the Autopista Nacional (A-1) in Madruga, east-central Mayabeque Province, Cuba, on 23 October 2013: (a) side view and (b) under tail. Photographs by James W. Wiley.

for the family Timaliidae in the West Indies. Because Red-faced Liocichla has established breeding populations through cage bird escapes in other regions, potential for establishment of the species in the West Indies should be of concern to the conservation community.

***Leiothrix lutea* (Red-billed Leiothrix; Family Timaliidae)**

YRC purchased a Red-billed Leiothrix from a pájarero, who said he captured the bird at Nueva Paz (22°44'30"N, 81°44'20"W; ~15 m asl), at the southeastern extreme of Mayabeque Province, Cuba, on 20 December 2013. The bird, a male in definitive basic plumage (Fig. 3), was trapped in a small woodlot. Judging by its plumage, YRC estimated its age at approximately 2 yr. YRC has since maintained the bird alive in his collection.

Red-billed Leiothrix is native to southern Asia, including India, Bhutan, Nepal, parts of Tibet, Myanmar, China, and Vietnam (Male *et al.* 1998, Dickinson 2003). It has been introduced to several regions, including Australia, Tahiti, Colombia, Japan, France, Hawaii, Mascarene Islands, Hong Kong, Great Britain, and possibly Spain and Germany (Male *et al.* 1998, Ralph *et al.* 1998). There are no previous records for Cuba or the West Indies.

Red-billed Leiothrix is a common cage bird (Wai 2006). It was imported into the United States in substantial numbers (as many as 6,038 birds in 1971) from 1968 to 1980 (Banks 1970, Banks and Clapp 1972, Clapp and Banks 1973a, 1973b, Clapp 1975, Nilsson 1981). Red-billed Leiothrix is included in Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), in part because of the large numbers harvested from the wild for the cage bird market (Ralph *et al.* 1998).

***Acridotheres cristatellus* (Crested Myna; Family Sturnidae)**

An individual of this species was captured by a pájarero in the city park in the town of Nueva Paz (22°45'43"N, 81°45'14"W;



Fig. 3. Adult male Red-billed Leiothrix in definitive basic plumage captured by a pájarero at Nueva Paz, Mayabeque Province, Cuba, on 20 December 2013. Photographs by James W. Wiley.



Fig. 4. Male Crested Myna in definitive basic plumage captured by a pájarero in the city park of Nueva Paz, Mayabeque Province, Cuba, on 12 December 2013. Photograph by James W. Wiley.

~20 m asl), Nueva Paz municipality, at the southeastern extreme of Mayabeque Province, Cuba, on 12 December 2013. The myna, a male, was in definitive basic plumage and sang in captivity (Fig. 4). YRC estimated it to be 2–3 yr old, and has maintained the bird alive in his aviary.

Crested Myna is common and widespread in its native range of south-central, southern, and eastern China; Hainan Island; Indochina; and Taiwan (Johnson and Campbell 1995, Feare and Craig 1999, Dickinson 2003). It has been successfully introduced in Argentina, Penang, Singapore, Japan, Austria, Borneo, and the Philippines (Feare and Craig 1999). In North America, Crested Myna was introduced into the Vancouver region of British Columbia c. 1890–1897 (Scheffer and Cottam 1935, Johnson 1974, Ehrlich et al. 1988:486, Johnson and Campbell 1995, AOU 1998, Feare and Craig 1999). It has been recorded casually, possibly escaped birds, in western Washington and northwestern Oregon (AOU 1998), and was tenuously established in Miami-Dade County, Florida (Kale et al. 1992). Crested Myna was not known previously from Cuba or the West Indies. The only other member of family Sturnidae in Cuba is European Starling (*Sturnus vulgaris*), listed as vagrant there by Garrido and Kirkconnell (2000).

Crested Myna is a popular cage bird because of its ability to mimic, especially human speech (Johnson and Campbell 1995, Feare and Craig 1999). Large numbers are used in the international bird trade (Wai 2006). It was imported to the United States in low to moderate numbers (0–563 annually) from 1968 to 1980, becoming increasingly common in the later years (Banks 1970, Banks and Clapp 1972, Clapp and Banks 1973a, 1973b, Clapp 1975, Nilsson 1981).

The potential for establishment of Crested Myna in the West Indies is high given the species' successful introduction in other regions, and because three other members of family Sturnidae have become established in the West Indies: European Starling, Common Myna (*Acridotheres tristis*), and Hill Myna (*Gracula religiosa*) (Raffaele et al. 1998, Avibase 2017). In addition, two species, White-vented Myna (*Acridotheres javanicus*) and Great Myna (*A. grandis*), have been reported from Puerto Rico as likely escaped cage birds (Pérez-Rivera and Cardona 1979, Raffaele 1989, Oberle 2010).

Euplectes macroura (Yellow-mantled Widowbird; Family Ploceidae)

While trapping Blue Grosbeaks (*Passerina caerulea*), Pavel González captured an immature (hatching year) male Yellow-mantled Widowbird (Fig. 5) in a rice field along the Carretera Central, near the town of Caimito (22°57'06"N, 82°35'56"W; ~90 m asl), Artemisa municipality, Artemisa Province, Cuba, on 17 December 2013. YRC purchased the widowbird from González and maintains it in captivity, where it molted into definitive basic plumage.

Yellow-mantled Widowbird is native to Africa, where it occurs in the Ethiopian highlands, Kenya south to Angola, Zimbabwe, Mozambique, Senegal to south Sudan, Tanzania, and Uganda (Dickinson 2003). It has not been reported previously for Cuba or the West Indies. However, another member of the family Ploceidae, Northern Red Bishop (*Euplectes franciscanus*), has been reported from Cuba (Garrido and Wiley 2010). Additionally, four ploceid species have been introduced to other islands of the West Indies: Northern Red Bishop to Jamaica, Puerto Rico, U.S. Virgin Islands, Guadeloupe, Martinique, and Barbados; Yellow-crowned Bishop (*E. afer*) to Jamaica, Puerto Rico, and Barbados; Southern Red Bishop (*E. orix*) to Jamaica, Guadeloupe, and Martinique; and Village Weaver (*Ploceus cucullatus*) to Hispaniola, Guadeloupe, and Martinique (Feldmann 1998, Raffaele et al. 1998, Avibase 2017).

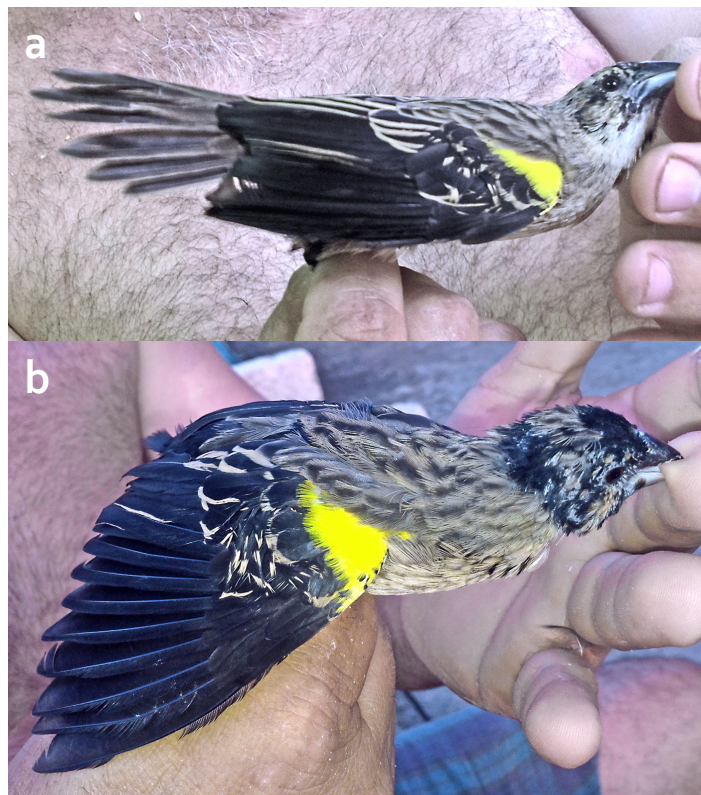


Fig. 5. Immature (hatching year) male Yellow-mantled Widowbird captured by Pavel González along the Carretera Central, near the town of Caimito, Artemisa Province, Cuba, on 17 December 2013: (a) lateral view and (b) lateral view with partially extended wing and back, and head molting into definitive plumage. Photographs by James W. Wiley.

Yellow-mantled Widowbird is not a common cage bird. Records from 1968 to 1981 reveal no documented importations into the United States (Banks 1970, Banks and Clapp 1972, Clapp and Banks 1973a, 1973b, Clapp 1975, Nilsson 1981).

***Montifringilla nivalis* (White-winged Snowfinch; Family Passeridae)**

Pavel González captured a White-winged Snowfinch in a rice field at Soroa (22°48'00"N, 83°01'00"W; ~210 m asl), Artemisa Province, 76 km west of La Habana, Cuba, while trapping Cuban Bullfinches (*Melopyrrha nigra*) on 12 February 2014. The snowfinch, a male, was in prebasic plumage when captured. YRC purchased the bird and maintained it in his aviary until the bird died on 25 April 2014. By that time the snowfinch had molted into definitive basic plumage. The specimen is now a skin in YRC's private collection (Fig. 6).

White-winged Snowfinch is native to the Alps and mountainous zones above 1,500 m, including the massifs of the Iberian Peninsula across southern Europe and central Asia to western

China (Dickinson 2003). It may move to slightly lower elevations in winter (Clement 1999). The snowfinch occurs as a vagrant to the islands of Heligoland, Malta, and the Canary Islands (Smith et al. 2013), which at c. 6,100 km, is the closest reported locality to Cuba. It has not been recorded previously in Cuba or the West Indies. Another member of the family Passeridae, House Sparrow (*Passer domesticus*), has been introduced widely in the region, including to Cuba, Cayman Islands, Puerto Rico, U.S. Virgin Islands, and Saint-Martin, and is considered rare or accidental in Jamaica, St. Kitts and Nevis, Montserrat, Guadeloupe, Saint-Martin, Saint Barthélemy, Barbados, and St. Vincent and the Grenadines (Raffaele et al. 1998, Clement 1999, Avibase 2017).

White-winged Snowfinch probably arrived in Cuba through vagrancy. The snowfinch is not a popular cage bird anywhere, although it is offered for sale occasionally through the internet. Other members of the Passeridae family have proven to be excellent colonists, but it is unlikely that White-winged Snowfinch was introduced to Cuba or will become established there.

***Passerina amoena* (Lazuli Bunting; Family Cardinalidae)**

Lazaro Fernández captured a male Lazuli Bunting in first basic plumage at Loma la Carolina (21°55'00"N, 78°41'00"W; ~48 m asl), 15 km north of Ciego de Ávila, Ciego de Ávila Province, central Cuba, on 20 November 2012 (Fig. 7a–c). Fernández said he trapped the bird in an area with small bushes. YRC acquired the bird from Fernández and has it in captivity, where it molted into definitive basic plumage. In addition to the Loma la Carolina observation, YRC examined an adult male Lazuli Bunting captured in December 2013 by a pájarero at Santa Fé (23°07'46"N, 82°15'43"W; ~31 m asl), Ciudad de La Habana Province (Fig. 7d).

Lazuli Bunting is a North American breeding species, occurring mainly west of the 100th meridian, from southern Canada to northern Texas, central New Mexico and Arizona, and southern California in the United States, and northwestern Baja California, Mexico (Greene et al. 1996, AOU 1998). In winter, it migrates to southeastern Arizona and Mexico (Greene et al. 1996, AOU 1998). It is of casual occurrence in Florida (Greene et al. 1996, Robertson and Woolfenden 1992). The only other report of the species in Cuba was by José Hernández Bauzá in the former La Habana Province, 29 March 1960 (Garrido and Kirkconnell 2000:216). Garrido and Kirkconnell (2000) list it as a vagrant to Cuba. The birds reported here are the second and third records of the species in Cuba and the West Indies.

Lazuli Bunting is likely a more frequent visitor to Cuba than known. Immature Lazuli Bunting is confused with female Indigo Bunting by pájareros, who only keep males, and release all females because they do not sing. Thus, they release any birds with plumage resembling that of females, including other species they might confuse with Indigo Bunting.

Discussion

Beginning as early as the 16th century, introductions of many bird species, intentional or accidental, have occurred through much of the Antillean region, with many of those introductions resulting in established breeding populations (Browne 1789, Blake 1975, Peña Franjul 1977, Levy 1991, Raffaele and Kepler 1992, Moreno 1997, Wiley and Kirwan 2013). However, most col-



Fig. 6. Male White-winged Snowfinch in near-complete basic plumage captured by Pavel González at Soroa, Artemisa Province, Cuba, on 12 February 2014: (a) dorsal view with partially opened wing and tail and (b) lateral view. Photographs by James W. Wiley.

onizing exotics, whether introduced accidentally, intentionally, or via natural dispersal, fail to become established for many reasons, including hostile environment, lack of suitable food, and small size of the colonizing population (Levy 1991, Wiley 1993).

Whereas some introduced populations have not resulted in problems for native ecosystems, other exotic species pose substantial risks to native species, including threats of competition, interbreeding, and disease (Fitzwater 1971, Gochfeld 1971, Peña Franjul 1977, Gruber 1981, Pérez-Rivera 1981, 1982, Barré and Benito-Espinal 1985, Colón Negrón 1997, Cruz 1997, Male *et al.* 1998, Lever 2005). Disease is perhaps the most insidious threat because native species lacking resistance to exotic diseases are exposed to new pathogens carried by introduced species (Pérez-Rivera 1981, van Riper and van Riper 1985, Wilson *et al.* 1994). For example, Red-billed Leiothrix are known to carry avian malaria (Fisher and Baldwin 1947, van Riper and van Riper 1985). Nevertheless, other risks should be considered substantial, including the threat seed-eating exotics pose to agricultural crops, especially rice, sorghum, and maize (Fitzwater 1971, Gochfeld 1973, Pérez-Rivera 1981, 1982).

Intentional introductions have been made for a variety of reasons, including control of other exotics and to “enhance the native fauna” (e.g., supplement game species, increase diversity, or add colorful species; Danforth 1935, Seaman 1960, Blake 1975). Introduction to augment native diversity is especially prevalent among pajareros in Cuba (YRC, JWW, and OHG pers. obs.). Cuba has a long-standing tradition of keeping many species of native and exotic birds as “pets,” and in fact, the practice is still deep-seated in Cuban culture. Harvesting for pets and international trade played a major role in the precipitous declines of Cuban Parrot (*Amazona leucocephala*) and Cuban Parakeet (*Psittacara euops*) populations (including the extirpation of the parakeet from Isla de Pinos), and the extinction of Cuban Macaw (*Ara tricolor*) (Wiley and Kirwan 2013). Smith (1943, 1944) noted the large number of cage birds in Cuba, including the importation of many species, in the mid-20th century. Wild bird harvest and trade have continued to the present, although importation of exotics has slowed considerably because of stricter regulations and economic constraints; i.e., the market is small and most people cannot afford to pay the price of expensive imported birds. Nevertheless, smuggling of birds into and out of Cuba continues at a moderate level (e.g., U.S. Fish and Wildlife Service 2001, Zimmerman 2006, Anonymous 2012, Ayón Güemes *et al.* 2013, Robinson 2014).

The sources in Cuba of the several exotic bird species we report here are unknown and difficult to determine. YRC contacted members of the Asociación Nacional Ornitológica de Cuba (ANOC), a small Cuban organization that imports and exports birds for sale, as well as many private bird traders and breeders, but none knew of the exotic species we report. In fact, some of those birds do not breed readily in captivity, do not sing, or have unremarkable plumages, and therefore, are quite rare in private collections worldwide (e.g., White-winged Snowfinch). Other species that are more common in the bird trade are not known to have been imported into Cuba, but transport by man is the most likely means of their arrival there because we are not aware of nearby populations of White-eared Bulbul, Red-faced Liocichla, Red-billed Leiothrix, or Yellow-mantled Widowbird that could

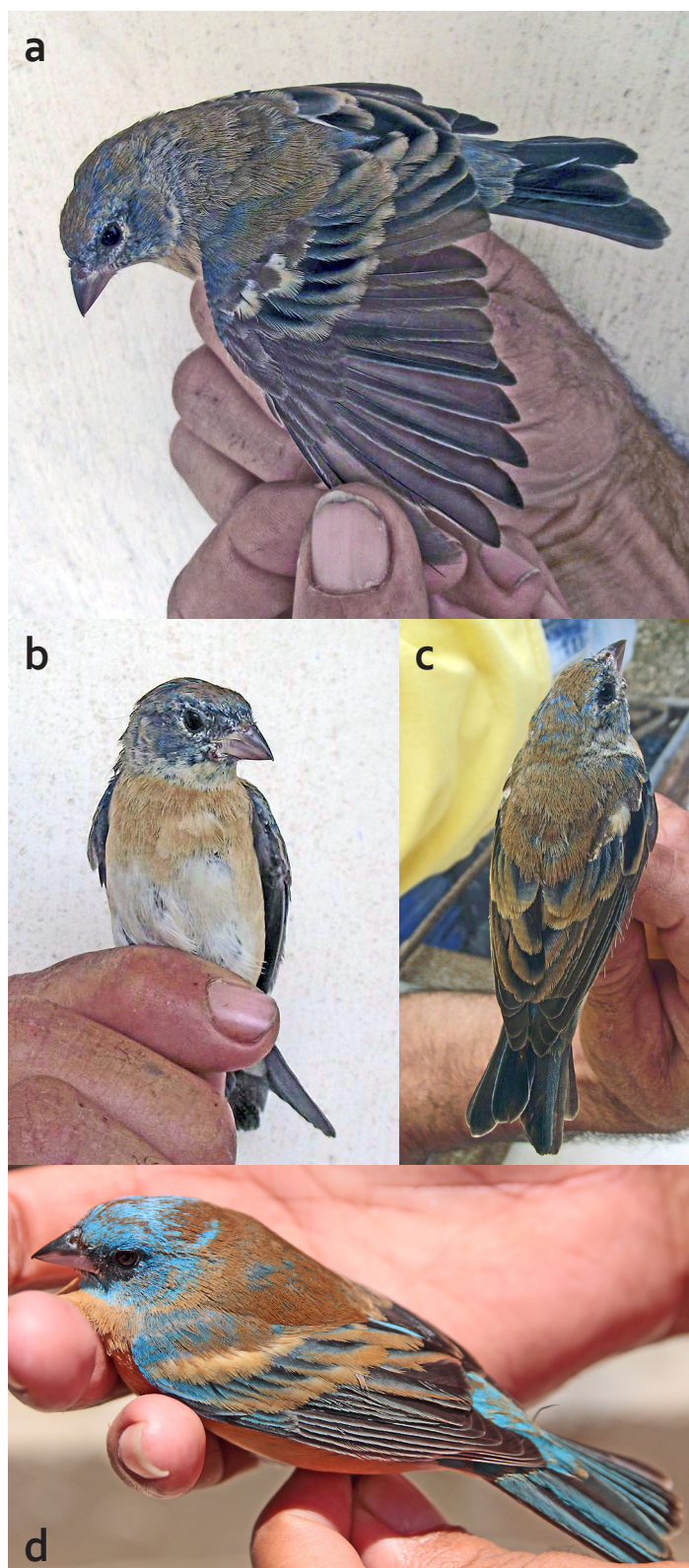


Fig. 7. Male Lazuli Bunting in first basic plumage captured by Lazaro Fernández at Loma la Carolina, 15 km north of Ciego de Ávila, Ciego de Ávila Province, central Cuba, on 20 November 2012: (a) side view with partially extended wing, (b) view of chest and abdomen, and (c) dorsal view. (d) Male in definitive basic plumage captured by a pájarero at Santa Fé, Ciudad de La Habana Province, Cuba, in December 2013. Photographs by James W. Wiley.

serve as sources for unaided arrivals in Cuba. The source of the Crested Myna may have been the population in southern Florida, though this is unlikely given that the Florida population has dwindled to near extirpation in recent years (Florida Fish and Wildlife Conservation Commission 2003).

The presence of White-winged Snowfinch in Cuba is perplexing. It was not likely introduced by man, because it is not among the usual species in the exotic bird trade. Other Holarctic species occasionally stray as far south as the West Indies, including Water Pipit (*Anthus spinoletta* = American Pipit [*A. rubescens*]) on Eleuthera, Bahamas (Obst 1977), and Cuba (Good and Alayon 2014); Snow Bunting (*Plectrophenax nivalis*) on Cat Island, Bahamas (Paulson 1966); Northern Wheatear (*Oenanthe oenanthe*) on Andros Island, Bahamas (Norton 1982), Cuba (Garrido and Kirkconnell 2000), and Barbados (Buckley et al. 2009); Common Redpoll (*Acanthis flammea*) on Eleuthera, Bahamas (Norton 1986); and White Wagtail (*Motacilla alba*) on Barbados (Norton 1987, Buckley et al. 2009). Thus, it is possible White-winged Snowfinch could be a naturally occurring vagrant in Cuba.

Although only single individuals of several potential colonizing species have been found in Cuba thus far, most probably arrived through importation for the bird trade. Thus, the potential for additional introductions remains high and warrants vigilance. The potential threats of disease and destruction of crops should rouse government into actions to effectively restrict importation of exotic birds.

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