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New records of bird species from Ilha Grande, state of Rio de Janeiro, southeastern Brazil

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Figure 5 does not refer to the Great Black-Hawk, *Urubitinga urubitinga* (Gmelin, 1788), but to a young individual of White-tailed Hawk, *Geranoaetus albicaudatus* Vieillot, 1816, a species previously recorded in Ilha Grande. For this last species, the third primary wing feather is longer than the adjacent wing feathers and the tail is entirely pale, while for *U. urubitinga* the third and fourth wing primary feathers are almost the same length and the tail has a dark subterminal band. Although *U. urubitinga* is already documented on the

adjacent mainland in Angra dos Reis, documented records are still lacking from Ilha Grande. Thus, our study (ALVES et al. 2016: <https://doi.org/10.15560/12.6.2017>) adds 31 species to Ilha Grande list, instead of 32 species as initially published, and records 253 species in total for this island. The other results of our study, including total of Atlantic Forest endemics and endangered species for Ilha Grande, remain unchanged.

The authors and editors regret this error.



New records of bird species from Ilha Grande, state of Rio de Janeiro, southeastern Brazil

Maria Alice S. Alves^{1,3}, Maurício Brandão Vecchi¹, Luis Martin Vallejos², Edvandro de Abreu Ribeiro², Jimi Martins-Silva² and Rafael de Sant'Ana Saint Clair²

¹Departamento de Ecologia, Instituto de Biologia Roberto Alcântara Gomes (IBRAG), Universidade do Estado do Rio de Janeiro (UERJ), Rua São Francisco Xavier, 524, CEP 20550-011, Rio de Janeiro, RJ, Brazil

²Programa de Pós-Graduação em Ecologia e Evolução, UERJ, IBRAG, Rua São Francisco Xavier, 524, CEP 20550-011, Rio de Janeiro, RJ, Brazil

³Corresponding author. E-mail: masaalves19@gmail.com

Abstract: We add 32 new records of species to the existing checklist of birds of the coastal island of Ilha Grande, state of Rio de Janeiro, Brazil. Notably, seven of these species are endemic to the Atlantic Forest. *Sporophila falcirostris* is globally Vulnerable and *Haematopus palliatus* is Near Threatened in Brazil. We also report the second record of *Agelaioides badius* from Rio de Janeiro state. We also compare our species list with lists of birds of Ilhabela and Anchieta islands. While some of the newly recorded species are probably non-resident to Ilha Grande or represent range expansions, most species occur in Rio de Janeiro throughout the year. Thus, our records may be a consequence of the surveying new sites on the island but also recent colonization. Our study increases the number of bird species known to occur on Ilha Grande from 222 to 254, which is one-third of the species reported from Rio de Janeiro state. We recorded 13 species threatened by extinction at regional, national or global levels.

Keywords: *Agelaioides badius*; Angra dos Reis; Atlantic Forest; avian fauna; conservation; Grayish Baywing; coastal island

INTRODUCTION

Ilha Grande is part of the Costa Verde ('the Green Coast') region of the Brazilian state of Rio de Janeiro and is home to a high concentration of endemic and threatened bird species in the Brazilian state of Rio de Janeiro (ALVES et al. 2009). This island (Ilha Grande) is an important locality for bird conservation, as it includes one of the largest continuous remnants of Atlantic Forest in this state, which harbors 222 bird species, including 44 endemic to the Atlantic Forest and nine threatened with extinction (ALVES & VECCHI 2009). As part of our ongoing long-term study of Ilha Grande and to update our previous list of birds of Ilha Grande (ALVES et al. 2009), we present new records of 32 bird species previously unknown from this island and compare the avifauna with Ilhabela and Ilha Anchieta, two nearby islands in southeastern Brazil.

MATERIALS AND METHODS

Ilha Grande, on the southern coast of the state of Rio de Janeiro, has an area of 19,300 ha and is part of the municipality of Angra dos Reis (centered on 23.25° S, 044.25° W, datum WGS84; Figure 1). The year-round average temperature is 22.5°C (BITTENCOURT & ROCHA 2002) and the average annual rainfall is 2,200 mm (ROCHA-PESSÔA & ROCHA 2008). The vegetation is typical of the Atlantic Forest *Floresta Ombrófila Densa* (dense rainforest), *restinga* (vegetation of the sandy plain coastal associated with the Atlantic Forest; SOUZA et al. 2008), and mangroves, mainly in the eastern face of the island (ALHO et al. 2002). The vegetation forms a mosaic of different stages of regeneration due to anthropogenic disturbance caused by past cultivation of gardens (ALHO et al. 2002) and agriculture; these activities were ceased in 1971 when the state park (Parque Estadual da Ilha Grande) was established (State Decree no.15.273/1971; ARAÚJO & OLIVEIRA 1988). Currently, the park encompasses 12,052 ha (State Decree no.40.602/2007).

Most of the records we present were collected from May 2013 to December 2015 inside state park, which covers about 62% of the island. Most of these data were collected during the Program for Biodiversity Studies (Programa de Pesquisas em Biodiversidade, PPBio; MAGNUSSON et al. 2008), using the RAPELD protocol. This long-term project includes rapid inventories (MAGNUSSON et al. 2005). We sampled in two modules ca. 12 km apart, each one encompassing 10 plots, with each plot 250 × 1.5 m and placed at least 1 km apart. Plot placement followed isoclines. Birds were captured in the eastern module using mist nets but were also identified in point counts and transects. In the western module we only used point counts and transects. We operated under the following permits: CEMAVE/ICMBio 1237, INEA 008/2007, and SISBIO 14210.

In each plot, we set 10 mist nets (12 × 2.5 m, mesh 36

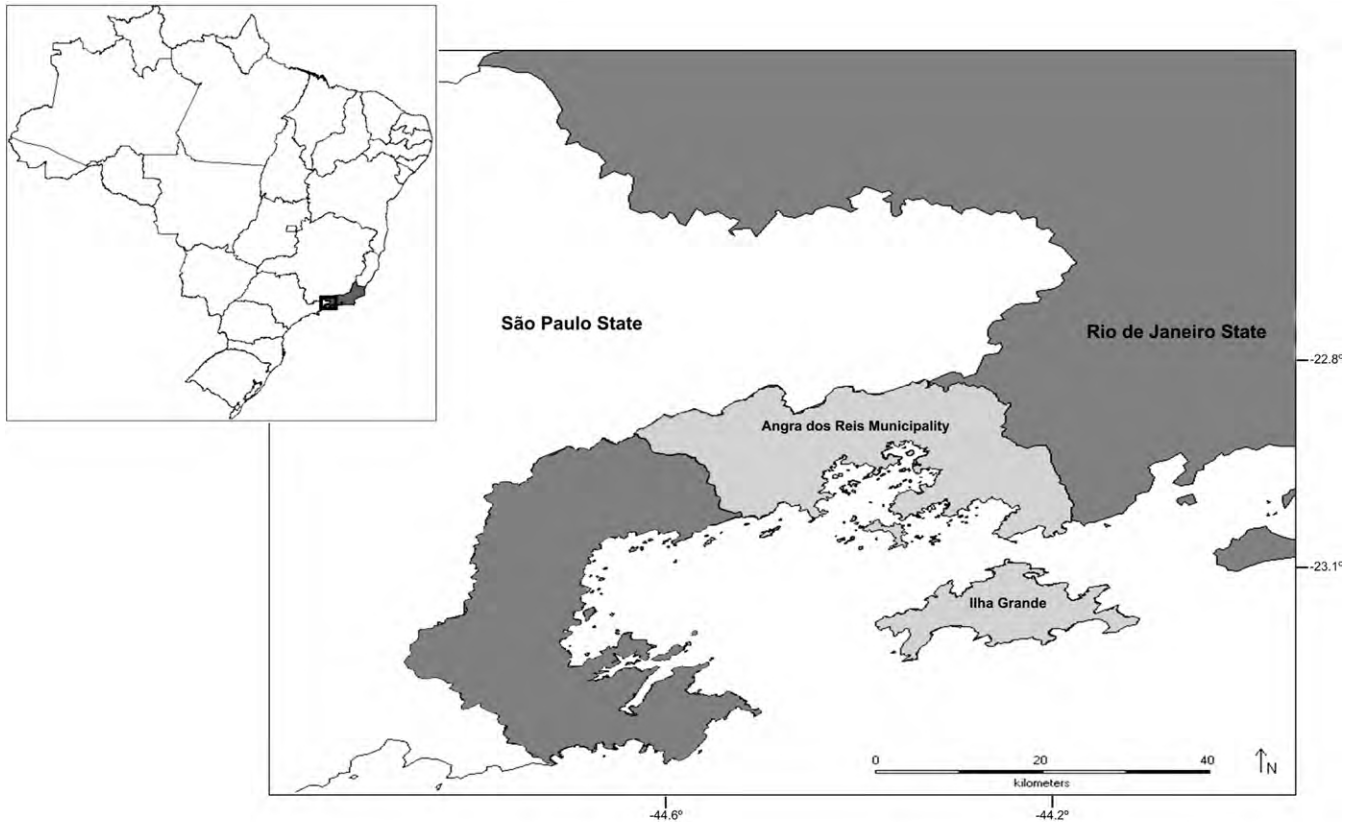


Figure 1. Rio de Janeiro state (dark gray) in southeast Brazil. Light gray indicates the municipality of Angra dos Reis, which includes Ilha Grande.

mm), which were installed initially every three months (May 2013 to August 2014) and then every six months (August 2014 to December 2015) in the forest understory and remained open for seven consecutive hours after dawn. Twenty-four transects (350 × 50 m, 25 m each side of the trail) were conducted, including 12 in the RAPELD modules. These transects included the area of each plot plus 100 m outside it. Each transect was sampled twice: in the rainy season (August to March) and in the drier season (April to July) for a total of 2,000 minutes of sampling. In each transect, two point counts at least 250 m apart and each with a radius of 50 m were sampled for 20 min between 6:00 h and 7:00 h, totaling 1,920 hours. In addition to this standardized diurnal sampling, we included occasional records obtained from different sites on the island since 2006, most of them collected in terrestrial and forest habitats. Guide books were used to identify birds when necessary: RIDGELY & TUDOR (1989); VAN PERLO (2009); and RIDGELY et al. (2015).

In addition to fieldwork, we reviewed the literature and included seven secondary records documented by birdwatchers or other ornithologists and made publicly available (i.e., Wikiaves, <http://wikiaves.com.br>, and Macaulay, <http://macaulaylibrary.org>). Noteworthy records from MARSDEN et al. (2003) were not considered. That study included 56 species from a short-term survey (June to August 1999) within a restricted elevation range (no more than 300 m above sea level). However, 10 of these species have never been recorded by other researchers, including by us during our long-term research. For example, MARSDEN

et al. (2003) supposedly recorded *Sclerurus caudacutus* (Vieillot, 1816), Black-tailed Leaf-tosser, which is known to occur no further south than Espírito Santo (RIDGELY et al. 2015), at least 400 km from Ilha Grande, rather than *S. scansor* (Ménétries, 1835), a common species on the island.

The taxonomy follows Brazilian Ornithological Records Committee (PIACENTINI et al. 2015). We base the conservation status on the regional (ALVES et al. 2000), Brazilian (MMA 2014) and global (IUCN 2015) listings.

RESULTS

Including both primary and secondary data from 12 locations on the island, we recorded 32 bird species not reported previously for Ilha Grande (Figure 2; Table 1).

A total of 21 species were recorded by us (primary data) and eight were recorded by others (secondary data; personal communications). All these birds were identified based on their diagnostic characteristics. Two species were also documented by voice recording: *Tiaris fuliginosus* (Wied, 1830) and *Sporophila falcirostris* (Temminck, 1820). Eleven species are supported by photographic documentation (Figures 3–12; GONÇALVES 2012). Except for four species records from the literature, diagnostic characteristics of the other 16 undocumented species are described below:

Dendrocygna viduata (Linnaeus, 1766), White-faced Whistling-Duck.

We recorded a flock with ca. 20 individuals that had unmistakable characteristics, such as their black

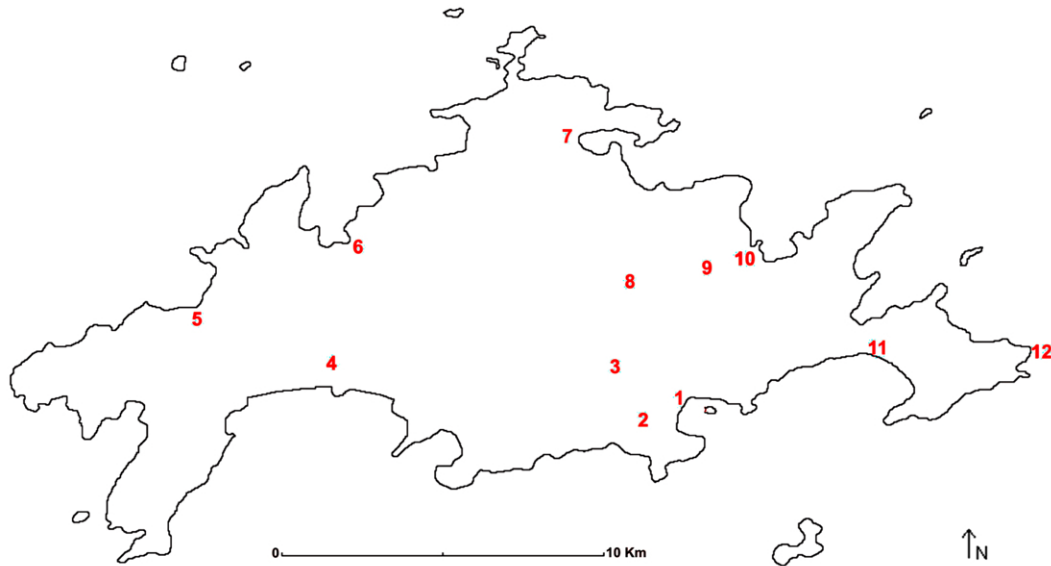


Figure 2. Localities for the birds records on Ilha Grande, Rio de Janeiro state: 1) Vila Dois Rios; 2) Parnaioaca; 3) Vila Dois Rios; 4) Praia do Sul; 5) Araçatiba; 6) Ponta Grossa (Sítio Forte); 7) Saco do Céu; 8) Pico do Papagaio; 9) between Vila Abraão and Vila Dois Rios; 10) Vila Abraão; 11) Lopes Mendes; 12) Praia dos Castelhanos.

Table 1. New records of bird species for Ilha Grande, in the state of Rio de Janeiro, southeastern Brazil. Asterisk indicates species endemic to the Atlantic Forest (following BENCKE et al. 2006). Taxonomy follows PIACENTINI et al. (2015). Record type: V) visual, P) photographic, A) aural, and C) mist net capture. Secondary sources refer to personal communication, except COELHO et al. (1991), PACHECO et al. (1997), and MACIEL (2015).

Taxon	Common name	Record type	Date	Coordinates (WGS84)	Place	Documentation
Anatidae						
<i>Dendrocygna viduata</i> (Linnaeus, 1766)	White-faced Whistling-Duck	V	June 2013	23.133°S, 044.167°W	Vila Abraão	
Cracidae						
<i>Penelope supercilialis</i> (Temminck, 1815)	Rusty-margined Guan	V	March 2015	23.183°S, 044.183°W	Parnaioaca trail	
Phalacrocoracidae						
<i>Nannopterum brasilianus</i> (Gmelin, 1789)	Neotropic Cormorant	V, P	November 2014	23.150°S, 044.317°W	Araçatiba	Figure 3
Ardeidae						
<i>Cochlearius cochlearius</i> (Linnaeus, 1766)	Boat-billed Heron	V	November 2006	23.183°S, 044.183°W	Vila Dois Rios	
<i>Nyctanassa violacea</i> (Linnaeus, 1758)	Yellow-crowned Night-heron	V, P	September 2008	23.167°S, 044.283°W	Praia do Sul, (also Saco-do-céu in 2014)	Figure 4
Accipitridae						
<i>Chondrohierax uncinatus</i> (Temminck, 1822)	Hook-billed Kite	V	October 2015	23.133°S, 044.167°W	Vila Abraão	
<i>Urubitinga urubitinga</i> (Gmelin, 1788)	Great Black-hawk	V, P	January 2015	23.167°S, 044.200°W	Mãe-d'água (Vila Dois Rios surroundings)	Figure 5
Charadriidae						
<i>Charadrius semipalmatus</i> Bonaparte, 1825	Semipalmated Plover	V, P	April 2009	23.167°S, 044.283°W	Saco do Céu	Beto Campos Figure 6
Haematopodidae						
<i>Haematopus palliatus</i> Temminck, 1820	American Oystercatcher	V, P	February 2015	23.133°S, 044.167°W	Vila Abraão	Figure 7
Sternidae						
<i>Anous stolidus</i> (Linnaeus, 1758)	Brown Noddy	V, P	January 2010	23.150°S, 044.083°W	Praia dos Castelhanos	Beto Campos Figure 8
Columbidae						
<i>Patagioenas picazuro</i> (Temminck, 1813)	Picazuro Pigeon	V, P, A	March 2013	23.183°S, 044.183°W	Vila Dois Rios	Figure 9
Strigidae						
<i>Megascops atricapilla</i> (Temminck, 1822)*	Black-capped Screech Owl	-	April 1993	23.167°S, 044.283°W	Praia do Sul (also recorded in the present study between Vila Abraão and Vila Dois Rios)	PACHECO et al. (1997)
<i>Asio clamator</i> (Vieillot, 1808)	Striped Owl	V, P	May 2014	23.133°S, 044.167°W	Vila Abraão	

Continued

Table 1. Continued.

Caprimulgidae						
<i>Antrostomus rufus</i> (Boddaert, 1783)	Rufous Nightjar	V	May 2013	23.183°S, 044.183°W	Parnaioca trail	
Trochilidae						
<i>Aphantochroa cirrochloris</i> (Vieillot, 1818)*	Somber Hummingbird	P	May 2015	23.133°S, 044.167°W	Vila Abraão	MACIEL (2016) wikiaves.com/1734576
<i>Leucochloris albicollis</i> (Vieillot, 1818)*	White-throated Hummingbird	C	February 2010	23.183°S, 044.183°W	Vila Dois Rios surroundings	
<i>Heliodoxa rubricauda</i> (Boddaert, 1783)*	Brazilian Ruby	V	September 2014	23.150°S, 044.183°W	Pico do Papagaio	
Trogonidae						
<i>Trogon surrucura</i> Vieillot, 1817*	Surucua Trogon	V	June 2013	23.150°S, 044.183°W	Pico do Papagaio trail	
Ramphastidae						
<i>Ramphastos toco</i> Statius Muller, 1776	Toco Toucan	V	October 2015	23.117°S, 044.283°W	Ponta Grossa- Sitio Forte	Juliana Gomes
Falconidae						
<i>Micrastur semitorquatus</i> (Vieillot, 1817)	Collared Forest-falcon	A	May 2015	23.150°S, 044.183°W	Pico do Papagaio trail	Hugo Miranda
<i>Falco sparverius</i> Linnaeus, 1758	American Kestrel	V, P	December 2015	23.183°S, 044.183°W	Vila Dois Rios	
Furnariidae						
<i>Furnarius figulus</i> (Lichtenstein, 1823)	Wing-banded Hornero	V, P	April and November 2010	23.183°S, 044.183°W	Vila Dois Rios	Figure 10
<i>Synallaxis cinerascens</i> Temminck, 1823	Gray-bellied Spinetail	-	-	-	-	COELHO et al. (1991)
Rhynchocyclidae						
<i>Corythopsis delalandi</i> (Lesson, 1830)	Southern Antpiper	C	February 2014	23.150°S, 044.167°W	Between Vila Abraão and Vila Dois Rios	
Hirundinidae						
<i>Atticora tibialis</i> (Cassin, 1853)	White-thighed Swallow	V	July 1999	23.183°S, 044.183°W	Vila Dois Rios	Stuart Leonard Pimm
<i>Progne subis</i> (Linnaeus, 1758)	Purple Martin	P	January 2012	23.133°S, 044.167°W	Vila Abraão	GONÇALVES (2012) wikiaves.com/570841
Icteridae						
<i>Psarocolius decumanus</i> (Pallas, 1769)	Crested Oropendola	P	June 2016	23.150°S, 044.117°W	Lopes Mendes	Fabiana Inés Oviedo Figure 11
<i>Gnorimopsar chopi</i> (Vieillot, 1819)	Chopi Blackbird	V	March 2013	23.183°S, 044.183°W	Vila Dois Rios	
<i>Agelaioides badius</i> (Vieillot, 1819)	Grayish Baywing	V, A	October 2012	23.183°S, 044.183°W	Vila Dois Rios	Juan Ignacio Areta
Thraupidae						
<i>Conirostrum speciosum</i> (Temminck, 1824)	Chestnut-vented Conebill	V, P	May 2014	23.183°S, 044.183°W	Vila Dois Rios	Figure 12
<i>Tiaris fuliginosus</i> (Wied, 1830)*	Sooty Grassquit	V, A	October 2012	23.183°S, 044.183°W	Parnaioca trail	Juan Ignacio Areta Macaulay Library/ ML174953
<i>Sporophila falcirostris</i> (Temminck, 1820)*	Temminck's Seedeater	V, A	February 2009	23.150°S, 044.167°W	Between Vila Abraão and Vila Dois Rios	www.xenocanto.org; XC111915



Figure 3. Neotropic Cormorant (*Nannopterum brasilianus*) recorded in November 2014 in Araçatiba, Ilha Grande. Photo by LMV.

neck contrasting with white front part of the head, chin and throat. They also presented white-barred black breast-sides and flanks. They emitted a sibilant trisyllabic whistle typical of this species.

Penelope superciliaris (Temminck, 1815), Rusty-margined Guan

We observed an individual with the unmistakable silhouette of a cracid, which had upper wing feathers margined with rufous and a whitish conspicuous eyebrow.

Cochlearius cochlearius (Linnaeus, 1766), Boat-billed Heron

We observed an individual of this very distinctive heron at night in a mangrove. It was identified by its broad, flattened and thick bill. Its forehead, cheeks, throat and breast were white. Its underparts were mostly rufous and its flanks black; the eyes were large and dusky red.

Chondrohierax uncinatus (Temminck, 1822), Hook-billed Kite

We observed an adult female, with sharply-hooked bill



Figure 4. Yellow-crowned Night-heron (*Nyctanassa violacea*) recorded in September 2008 in Saco do Céu, Ilha Grande. Photo by LMV.



Figure 5. Great Black-Hawk (*Urubitinga urubitinga*) recorded in January 2015 in Mãe-d'Água, vicinity of Vila Dois Rios, Ilha Grande. Photo by LMV.

and yellowish cere. It presented brown upperparts with rufous nuchal collar, and it was whitish below, finely barred with rusty brown.

Asio clamator (Vieillot, 1808), Striped Owl

We recorded two adults before dawn. They presented a mostly white facial disc, bordered with black. They had long black ear tufts, the breast and belly were buff with black streaks.

Antrostomus rufus (Boddaert, 1783), Rufous Nightjar

An adult was recorded at sunset on the forest floor. It was rufescent-brown overall with blackish streaked upperparts and relatively wide and long tail. It presented



Figure 6. Semipalmated Plover (*Charadrius semipalmatus*) recorded in April 2009 in Saco do Céu, Ilha Grande. Photo by Beto Campos.



Figure 7. American Oystercatcher (*Haematopus palliatus*) recorded in February 2015 in Vila Abraão, Ilha Grande. Photo by LMV.



Figure 8. Brown Noddy (*Anous stolidus*) recorded in January 2010 in Praia dos Castelhanos, Ilha Grande. Photo by Beto Campos.

a narrow whitish band on the lower throat. At night, the typical guttural croak of the male was heard in the canopy.

Leucochloris albicollis (Vieillot, 1818), White-throated Hummingbird

We mist-netted and banded an adult, which had golden-green upperparts and breast, with white throat and central



Figure 9. Picazuro Pigeon (*Patagioenas picazuro*) recorded in March 2013 in Vila Dois Rios, Ilha Grande. Photo by LMV.



Figure 11. Crested Oropendola (*Psarocolius decumanus*) recorded in June 2016 in Lopes Mendes, Ilha Grande. Photo by Fabiana Inés Oviedo.



Figure 10. Wing-banded Hornero (*Furnarius figulus*) recorded in November 2009 in Vila Dois Rios, Ilha Grande. Photo by MBV.



Figure 12. Chestnut-vented Conebill (*Conirostrum speciosum*) recorded in May 2014 in Vila Dois Rios, Ilha Grande. Photo by LMV.

belly. Its bill was straight, with black maxilla, reddish and dark-tipped mandible.

Heliodoxa rubricauda (Boddaert, 1783), Brazilian Ruby

We recorded an adult male with iridescent green forehead and crown. It presented shining ruby red throat, and a post ocular spot white. Tail was mostly rufous.

Trogon surrucura Vieillot, 1817, Surucua Trogon

We recorded an adult female with dull gray upperparts, throat and breast. Notable yellow belly and black undertail, with outer tail feathers white on the outer margin.

Ramphastos toco Statius Müller, 1776, Toco Toucan

An individual was photographed by J. Gomes (pers. comm.) foraging on a banana tree. It has a mostly black body, with white from the neck to the chest and a distinctive red-orange bill with a black spot on the tip of the maxilla.

Micrastur semitorquatus (Vieillot, 1817), Collared Forest-falcon

An individual performing the common vocalization of the species was heard at dawn by H. Miranda (pers. comm.).

The bird emitted a series of single-note calls repeated at two-second intervals, resembling a deep human nasal voice. A few weeks later, this species was heard again by LMV in another point in the forest; the call included double notes, with the second one higher.

Falco sparverius Linnaeus, 1758, American Kestrel

We observed an adult female presenting two black vertical bars on the face. It had brown barred upperparts and streaked underparts.

Corythopis delalandi (Lesson, 1830), Southern Antpipit

We mist-netted and banded an adult. It presented a yellow mandible and broad black pectoral band with streaks extending down the flanks.

Atticora tibialis (Cassin, 1853), White-thighed Swallow

An adult was recorded perched on a power line by S. L. Pimm (pers. comm.) after he watched it flying for approximately five minutes. It was very small, looked almost all black in the shade, and had an erratic, bat-like flight. Tail was slightly forked and grey-brown underparts with a tuft of white feathers on the lower leg.

Gnorimopsar chopi (Vieillot, 1819), Chopi Blackbird

We recorded an individual with overall black plumage, with little glossy black except on the head. Feathers of the head were narrow and pointed. Iris, bill and legs were black.

Agelaioides badius (Vieillot, 1819), Grayish Baywing

A flock with 4 or 5 individuals with similar plumage was recorded by J. I. Areta (pers. comm.). They presented grayish brown upperparts, paler underparts and mostly rufous wings. Bill was black and they had a narrow mask around the eye. The flock was securely identified by their trills, whistles and contact calls, which differ markedly from those of the Pale Baywing (*Agelaioides fringillarius* Spix, 1824) and the Screaming Cowbird (*Molothrus rufoaxillaris* Cassin, 1866).

In addition, the new records include seven endemic species to the Atlantic forest (Table 1). Among these new records two are notable, the endemic and threatened *Sporophila falcirostris* (Temminck, 1820), and also *Haematopus palliatus* Temminck, 1820 which is categorized as Near Threatened in the Brazilian list.

DISCUSSION

Twelve of the 254 species known from Ilha Grande are threatened regionally (RJ), nationally (BR) and/or globally (GL) with extinction. They are: Solitary Tinamou *Tinamus solitarius* (Vieillot, 1819) (Endangered – RJ), Royal Tern *Thalasseus maximus* (Boddaert, 1783) (Endangered – BR), White-necked Hawk *Amadonastur lacernulatus* (Temminck, 1827) (Vulnerable – RJ, BR, GL), Red-browed Parrot *Amazona rhodocorytha* (Salvadori, 1890) (Vulnerable – RJ, BR; Endangered - GL), Mealy Parrot *Amazona farinosa* (Boddaert, 1783) (Endangered - RJ), Red-ruffed Fruitcrow *Pyroderus scutatus* (Shaw, 1792) (Vulnerable – RJ), Cinnamon-vented Piha *Lipaugus lanioides* (Lesson, 1844) (Vulnerable – RJ), Bare-throated Bellbird *Procnias nudicollis* (Vieillot, 1817) (Vulnerable – GL), Black-backed Tanager *Tangara peruviana* (Desmarest, 1806) (Vulnerable – BR, GL), Buffy-fronted Seedeater *Sporophila frontalis* (Verreaux, 1869) (Endangered – RJ; Vulnerable – BR, GL), *S. falcirostris* (Endangered – RJ; Vulnerable – BR, GL) and Rusty-collared Seedeater *S. collaris* (Boddaert, 1783) (Endangered – RJ).

Nineteen species reported for Ilha Grande by ALVES & VECCHI (2009) as secondary data, were confirmed here: *Nycticorax nycticorax* (Linnaeus, 1758) (VALLEJOS 2016d); *Harpagus diodon* (Temminck, 1823) (VALLEJOS 2016c); *Geranospiza caeruleascens* (Vieillot, 1817), *Rupornis magnirostris* (Gmelin, 1788) (VALLEJOS 2016a); *Actitis macularius* (Linnaeus, 1766); *Sterna hirundinacea* Lesson, 1831, *Thalasseus acuflavidus* (Cabot, 1847); *Thalasseus maximus* (Boddaert, 1783) (VALLEJOS 2016g); *Lurocalis semitorquatus* (Gmelin, 1789); *Hydropsalis torquata* (Gmelin, 1789); *Falco femoralis* Temminck, 1822 (VALLEJOS 2016f); *Schiffornis virescens* (Lafresnaye, 1838); *Tyranniscus burmeisteri* (Cabanis & Heine, 1859) (VALLEJOS 2016h);

Myiarchus swainsoni Cabanis & Heine, 1859; *Sirystes sibilator* (Vieillot, 1818); *Empidonomus varius* (Vieillot, 1818) (VALLEJOS 2016e); *Knipolegus nigerrimus* (Vieillot, 1818) (VALLEJOS 2016b); *Hylophilus thoracicus* Temminck, 1822; and *Tangara cayana* (Linnaeus, 1766).

Records of *Thalasseus maximus* and *Knipolegus nigerrimus* are noteworthy. In Brazil, *T. maximus* is known to breed in small populations on coastal islands of São Paulo state (CAMPOS et al. 2004), including islets near Ilhabela, approximately 100 km southwest of Ilha Grande. This species was recently up-listed from Vulnerable to Endangered in Brazil (MMA 2014) due to an estimated continuing decline in the number of mature individuals. *Knipolegus nigerrimus* is endemic to the Atlantic Forest (BENCKE et al. 2006) above 700 m (PARKER et al. 1996), and consistent with this, we recorded it at Pico do Papagaio, at ca. 900 m above sea level. On Ilha Grande, this species is probably restricted to just a few areas of high elevation.

Anous stolidus (Linnaeus, 1758) breeds in Brazil on a number of oceanic islands (TEIXEIRA et al. 1988) from September to November (see PACHECO & RAJÃO 1995). After breeding, individuals disperse to the open sea (GOCHFELD et al. 2016), although some near-shore sightings are possible, mostly of young individuals (DIAS et al. 2010). Records from the coast of Rio de Janeiro state include the municipalities of Rio de Janeiro (May 1987; TEIXEIRA et al. 1988) and Cabo Frio (April 1993; PACHECO & RAJÃO 1995). In addition, a fresh corpse of a young individual was found just after midnight on 14 March 2010 on the road around Araruama Lagoon (L. Freire, pers. comm.), which indicates possible nocturnal activity. A young individual was recorded on Ilha Grande (Figure 8) in March, which coincides with the post-breeding dispersal period of the species.

Patagioenas picazuro (Temminck, 1813) is expanding into deforested areas throughout southeastern Brazil since at least the 1980s (WILLIS & ONIKI 1987). On Ilha Grande, this species is observed frequently in open areas since it was first recorded in early 2013 (BERGALLO et al. in press), although it may have been established earlier. It is observed frequently in open areas on the island.

Ramphastos toco, the least forest-dependent ramphastid, has likely benefited from deforestation in many areas (SICK 1997) and almost certainly undergoing range expansion. As our record is based on a single individual, we cannot confirm the establishment of a local population, nor can we rule out release or escape from captivity, given that this species is often raised as a pet.

Furnarius figulus (Lichtenstein, 1823) has been recorded in southeastern Brazil, including Rio de Janeiro, since the 1980s (SICK 1997), and has established breeding colonies in many new areas, including the coast of Rio de Janeiro state (LAGOS et al. 2005). Our new records from Ilha Grande are probably result of recent range expansions.

Progne subis (Linnaeus, 1758), according to SICK (1997), migrates to southeastern Brazil, including São Paulo, Rio de Janeiro (November, March, April, May) and Espírito Santo states, where it is found between October and February.

BROWNE (2005) recorded a single bird on a roof in February 2001 in Paraty, Rio de Janeiro state, and the present record from Ilha Grande, in January 2012 (GONÇALVES 2012), is one of only a few documented records for the state. In addition, approximately 200 individuals of this species were observed in the municipality of Rio das Ostras in February and March 2015 (EAR pers. observ.).

Agelaioides badius (Vieillot, 1819) is considered to be one of the rarest bird species (MALLET-RODRIGUES & PACHECO 2015) in Rio de Janeiro state. Our record of this species is the second for the state. The only other record was in the municipality of Rio de Janeiro in January 1969 (specimen deposited in National Museum at Rio de Janeiro, MN48648).

Sporophila falcirostris is nomadic and moving in search of bamboo seeds, like the Sooty Grassquit (ARETA et al. 2009). Indeed, on Ilha Grande we recorded this species foraging on fruiting bamboo, *Guadua tagoara* (Nees) Kunth, at about 200 m elevation, and later on an unidentified bamboo near Praia do Sul, at about 100 m elevation.

Bird lists are available for two forested islands in the same region as Ilha Grande: Ilhabela (FUNDAÇÃO FLORESTAL 2015) and Ilha Anchieta (GALETTI et al. 2012), both in São Paulo state. Considering terrestrial and forest bird species, Ilhabela is richer than Ilha Grande (323 vs. 219, respectively). While the distance between the two islands is 108 km, 188 species recorded on Ilha Grande (~86% of the total) were also recorded on Ilhabela. Ilhabela also encompasses higher numbers of globally and nationally threatened species (19 vs. eight on Ilha Grande), and a higher proportion of Atlantic forest endemics: 87 species (27% of the total species on Ilhabela) versus 49 species (22%, of the total species on Ilha Grande). These differences may be related to area, as Ilhabela is almost twice the size of Ilha Grande, and also because it is closer (1.78 km) to the mainland. Despite this, five endemic Atlantic Forest species absent on Ilhabela do occur on Ilha Grande: *Megascops atricapilla* (Temminck, 1822), *Hydropsalis forcipata* (Nitzsch, 1840), *Veniliornis maculifrons* (Spix, 1824) and the threatened *Sporophila falcirostris* and *Amazona rhodocorytha*.

GALETTI et al. (2009) recorded 100 species on Ilha Anchieta, which is 400 m from the mainland. Of these species, 92 are terrestrial or forest-dwelling (15 endemic to the Atlantic Forest). The lower species richness in this island is probably due to its smaller area (826 ha), but also the invasion of mammalian predators, such as *Callithrix penicillata* (É. Geoffroy, 1812) and *Nasua nasua* Linnaeus, 1766 (GALETTI et al. 2009). Ilha Anchieta is 79 km from Ilha Grande, and 27 km from Ilhabela. Probably due to its greater proximity to Ilhabela, Anchieta shares 90 (98%) bird species with this island, and 83 (90%) with Ilha Grande.

In summary, the 32 new records presented here represent a 14% increase in the number of species recorded from Ilha Grande; 254 species are now known from the island, which represents one-third of the 769 species found in the state of Rio de Janeiro (GAGLIARDI 2015). While some of the new records presented here refer to occasional visitors

or range expansions favored by deforestation, most of the species are common and occur throughout the year in the state of Rio de Janeiro. These new records may reflect both the expansion of our knowledge of the island through the sampling of new localities but also natural temporal dynamics in the avian species composition, with new species colonizing the area, while others may become extinct.

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