BIRDS OF THE ARCHIPELAGOS OF MADEIRA AND THE SELVAGENS II – NEW RECORDS AND CHECKLIST UPDATE (1995-2010)

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With 10 figures and 4 tables

ABSTRACT. In the present paper an update of the 1995 checklist of the birds of the archipelagos of Madeira and Selvagens is presented. A total of 337 species and subspecies are listed, of which 42 are new additions to the previous checklist, including 4 new records, Muscovy Duck, *Cairina moschata*, Rose-ringed Parakeet, *Psittacula krameri*, Hooded Crow, *Corvus cornix cornix* and Iberian Chiffchaff, *Phylloscopus ibericus*. Comments are made on the new additions and new records. The checklist indicates the presence, or not, of a specimen in the collection of the Natural History Museum of Funchal, breeding status, original reference and a qualitative index of abundance and-or frequency.

RESUMO. Este trabalho pretende actualizar a lista de aves dos arquipélagos da Madeira e das Selvagens publicada em 1995. Um total de 337 taxa são listados, 42 dos quais constituem adições à lista anterior, incluindo 4 novos assinalamentos, Pato-do-mato, *Cairina moschata*, Periquito-de-colar, *Psittacula krameri*, Gralhacinzenta, *Corvus cornix cornix* e Felosa-Ibérica, *Phylloscopus ibericus*. São feitos comentários para cada nova adição ou primeiro assinalamento. Para cada taxon, a lista indica a presença ou não de espécime(s) nas colecções do Museu de História Natural do Funchal, o seu estatuto reprodutor, referência original de primeiro assinalamento e um índice qualitativo de abundância e ou frequência.

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INTRODUCTION

The archipelagos of Madeira and the Selvagens, are located in the north-eastern Atlantic Ocean (Fig. 1). Although not on the main migration routes for birds, with the notable exception of several pelagic species (Procellariiformes), the islands have accumulated a considerable number of bird records over the years; mostly European, but also some American and African species. These were last summarized by ZINO *et al.* (1995) who reported a series of new records and produced an up-dated checklist.

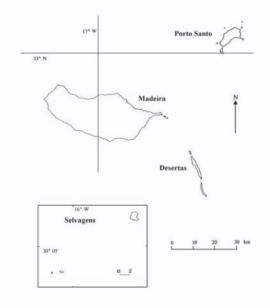


Fig. 1 - The archipelagos of Madeira and the Selvagens.

Over the last 15 years many new records have been noted. This is greatly due to the contribution of two of the authors (HR and CF), who since 2005 have been recording bird observations on a frequent basis, in their professional capacity in this field. Since 1995 there have been alterations in nomenclature as well as a new family systematic organization proposed by the International Ornithological Committee (GILL & DONSKER, 2010). All these additions and changes justify the present up-date. The increase in ornithological records since 1851 is summarized in Table 1.

It is worth noting that in August 2010 huge forest fires occurred in Madeira (ZINO & BISCOITO, *in press*). The impact of these fires on Zino's Petrel's breeding grounds has been dramatic and the consequences on the population of this highly endangered species remain to be seen. The impact on terrestrial birds is still unclear. Many species are known to breed in the burnt areas, which cover nearly 8500ha (11% of the island's surface), and consequently their populations may also be affected. Buzzards, *Buteo b. buteo*, which seem to have slightly declined in numbers over the last 10 years, possibly due to rat and mice eradication programmes, may well be amongst the affected species.

Author	Year	Extinct	Breeding species	Possible breeding species	Vagrants	Total
Harcourt, E.	1851	-	30	-	65	95
Hartwig, W.	1891	-	31	-	85	116
Schmitz, E.	1899	-	38	-	116	154
Schmitz, E.	1908a	-	39	-	165	204
Sarmento, A.	1936	3	29	-	175	207
Maul, G. E.	1948	-	39	-	172	211
Bernström, J.	1951	3	41	7	-	-
Bannerman, D. & M. Bannerman	1965	5	43	1	184	233
Zino et al.	1995	5	42	6	242	295
This paper	2010	5	47	5	280*	337

TABLE 1 - Increase in ornithological records since 1851.

(* Includes 8 dubious records and 3 unconfirmed records)

METHODS

In order to obtain the information given in this paper, a careful search was made through the available bibliography and the Internet (birdwatching news sites).

In the present paper, the birds listed have been divided into four groups. An abundance / frequency index was attributed to each species and a level of confidence was assigned to each record (Table 2).

All specimens held in the Natural History Museum of Funchal were carefully checked.

Category	Abundance/frequency	Confidence
Breeding species	Very common; Common;	
Possible breeding species	Rare; Very rare.	Accepted records;
	Frequent, Seasonal,	Unconfirmed records;
Vagrants	Occasional; Exceptional; Only	Dubious records.
	1 record.	
Extinct	n/a	n/a

TABLE 2 - Categorization of the records.

Categories

Breeding species are those breeding regularly in the archipelagos.

Possible breeding species are those reported to have bred in the past, but with no recent records and those in which there is strong evidence that they breed, but this has not been confirmed.

As Madeira and the Selvagens are not on the main migratory routes, except for some seabirds, all non-breeding records are considered vagrants.

Extinct species are those which have bred in the archipelago and may be locally or globally extinct.

Abundance / frequency

Breeding species and possible breeding species:

Very common - Species with large populations and/or widespread throughout the islands of the archipelagos;

Common - Species with large populations and/or occurring in most parts of the islands of the archipelagos;

Rare - Species with small populations and/or occurring in specific parts of the archipelagos;

Very Rare - Species with very small populations and/or restricted to small areas.

Vagrants:

Frequent - Species occurring throughout the year and/or staying for long periods in the archipelagos;

Seasonal - Species occurring seasonally and in general for short periods;

Occasional - Species occurring seasonally, but only during unusual weather conditions;

Exceptional - Species recorded less than 5 times in the last 50 years; Only 1 record - Species that have been recorded only once.

Confidence

Without a bird in hand, a Museum specimen or a good photograph, the record of new species relies totally on the expertise of the observer. This is the case for most records published prior to 1995 and accepted in the previous checklist (ZINO *et al.*, 1995).

For the purpose of the present checklist and with the increase of regular bird observations on the islands, together with the evolution of technology such as the common use of high definition cameras and other recording hardware, the bird records were classified as:

Accepted records - those documented with specimens, photographs, videos and/or call records allowing the confirmation of the identification by others.

Unconfirmed records - those reported by ornithologists or experienced birdwatchers, but not documented as above.

Dubious records - those for which the above conditions are not fulfilled. Also included in this category are accurately recorded species whose natural occurrence in the wild is considered so unlikely that they may be regarded as escaped cage birds.

The taxonomic arrangement and the English names (with few exceptions) in the present checklist follow GILL & DONSKER (2010). The use of subspecies follows SNOW *et al.* (1998) and SVENSSON *et al.* (2009). In the case of *Falco tinnunculus canariensis* we follow the opinion of BANNERMAN & BANNERMAN (1965).

Abbreviations used: CF - Catarina Correia-Fagundes; FZ - Francis Zino; HR - Hugo Romano; MB - Manuel Biscoito; MMF - Natural History Museum of Funchal.

Additions to the previous checklist (ZINO et al., 1995) and new records

Brant Goose, Branta bernicla (Linnaeus, 1758)

One was seen on four occasions between the 8th and the 12th of July 2006 at sea and on a pond at the Porto Santo golf course by Andrea Tarozzi. A second record was made by Carolina Santos, (who photographed it) and one of the authors (FZ) at Selvagem Grande (Baía das Pardelas) on the 12th of October 2009. The bird was seen at sea near shore in a much debilitated condition.

Wood Duck, Aix sponsa (Linnaeus, 1758) (Fig. 2)

A female specimen was recorded on video and photographed by HR at the mouth of Ribeira da Janela, Madeira, on the 27th of October 2009. The bird stayed there for a few months and was last seen on the 22nd January 2010.



Fig. 2 - Wood Duck, *Aix sponsa* at the mouth of Ribeira da Janela, Madeira, October 27th, 2009.

Gadwall, Anas strepera Linnaeus, 1758

One was observed for the first time on the Lugar de Baixo pond, Madeira, on the 17th of February 2006 by the authors (CF & HR) and Christopher Knibbs. On the 26th of October 2010 a juvenile on Lugar de Baixo pond and a drake at the river mouth, Ribeira Brava, Madeira, were photographed by HR and CF. Later in the same month other Gadwalls were seen at Porto Santo, by other ornithologists. One specimen in the MMF collection (MMF 24844). This Museum specimen, was overlooked by ZINO *et al.* (1995).

American Wigeon, Anas americana Gmelin, 1789

One juvenile or a female was photographed and recorded on video on the 4th of November 2008 on the Lugar de Baixo pond, by HR and two other birdwatchers. Strong western winds occurred prior to this observation and may have brought this American vagrant to Madeira.

Three juveniles or females were seen a year later, on the 1st of November 2009, on the same pond by HR and CF. A third observation of a juvenile or a female was made the same year, on the 2nd of December 2009, at the river mouth, Machico, Madeira.

Blue-winged Teal, Anas discors (Linnaeus, 1766)

A single bird was photographed by HR and CF from the Lugar de Baixo pond on the 4th of October 2008.

Green-winged Teal, Anas carolinensis Gmelin, 1789

One was observed and photographed by HR and CF on the 11th of February 2007 at the river mouth, Ribeira da Janela, Madeira. Identification was confirmed by Tony Clarke. On the 10th of December 2008 a second male was observed on the pond at Lugar de Baixo. At the time of writing, both birds are still present where they were originally observed.

Northern Fulmar, Fulmarus glacialis (Linnaeus, 1761)

A specimen was found dead (MMF 41374) on the beach at Porto Santo on the 1st of March 1997 by Duarte Câmara. It was first recorded at sea, on the 22nd of April 2008, by SHIRIHAI (2008), 28 miles south of Madeira.

Scopolli's Shearwater, *Calonectris diomedea diomedea* (Scopoli, 1769) (Fig. 3) One was seen and photographed off Ponta de São Lourenco, Madeira on the 30th

of August 2010 by CF and HR with four birdwachers. This single specimen was amongst a large concentration of Cory's Shearwaters, in a feeding frenzy. The differences in the underwing colouration of the two subspecies can be well observed in Fig. 3.



Fig. 3 - Scopolli's Shearwater *C. d. diomedea*, (A) amongst Cory's Shearwaters off Ponta de S. Lourenço, Madeira. It is noticeable the difference in the under-wing colouration, *C. d. borealis* (B) showing darker primaries than *C. d. diomedea*.

Sooty Shearwater, Puffinus griseus Gmelin, 1789

Although there were previous reports of the presence of this species in Madeiran waters, the first confirmed record was on the 5th of September 2005 when Philippe and Eli Van Audenhove saw 3 individuals. A further record was noted and photographed by one of the authors (CF) between Desertas and Madeira on the 8th July 2009.

Green Heron, Butorides virescens (Linnaeus, 1758)

A specimen was discovered by Rafael Matias in 2007 in the collection of the "Museu do Seminário". Although the origin of this specimen cannot be traced with absolute certainty, it is accepted as a record of the species from Madeira, based on the arguments given by MATIAS (2010).

Brown Booby, Sula leucogaster (Boddaert, 1783) (Fig. 4)

An immature was seen and photographed near the Desertas by Max Berlijn on the 1st of September 2009. A second observation near Deserta Grande (supposedly the same bird) was made by HR and CF on the 29th of July 2010. It was observed again in the same area on the 7th of August and on the 1st September 2010.



Fig. 4 - Brown Booby, *S. leucogaster* photographed on the west coast of Deserta Grande, on September 1st, 2010.

Booted Eagle, *Hieraaetus pennatus* (Gmelin, 1788)

One was observed and photographed for the first time at Machico, Madeira, on the 19th January 2008 by Don Taylor. A second record from Caniçal, Madeira was obtained on 17th of March 2008 by HR and other birdwatchers. Two further birds were seen and photographed on Selvagem Grande by FZ on the 14th of October 2009.

Sora, Porzana carolina (Linnaeus, 1758) (Fig. 5)

2010

One was observed and photographed by CF and HR at the side of the pond, Lugar de Baixo, on the 4th of December 2006. It was regularly seen at the same place until the 10th of March 2007.



Fig. 5 - Sora, *P. carolina* at the side of the pond, Lugar de Baixo, Madeira, December 4th, 2006.



Fig. 6 - Pacific Golden Plover, P. fulva at Caniçal, Madeira, on September 14th, 2010.

Lesser Moorhen, Gallinula angulata Sundevall, 1851

This species was recorded from Madeira by SCHMITZ (1896b), then as African Black Crake, *Limnocorax niger* (= *L. flavirostra*). MATIAS (2009) who studied the original specimen in the collection of the "Museu do Seminário" (now in the Funchal Botanical Gardens) re-identified it as *G. angulata*. The checklist is updated accordingly.

Pacific Golden Plover, Pluvialis fulva (Gmelin, 1789) (Fig. 6)

One was observed and photographed by HR and CF on the 14th of September 2010 at the back of the harbour wall of Caniçal, Madeira. The bird was moulting from summer to winter plumage.

American Golden Plover, Pluvialis dominica (Statius Muller, 1776)

A single observation was made by Peter Rozemeijer at Caniçal, Madeira, on the 17th of September 2008. The specimen was photographed and the species confirmed.

Hudsonian Whimbrel, Numenius phaeopus hudsonicus (Latham, 1790)

One was seen on the 15th of September 2008 by Paul Rendel at Ribeira da Janela. Second and third records were from Porto Moniz, on the 7th of July and on the 16th of August 2009, by Keith Moir and Vincent Van Der Spek, respectively. Another single specimen was seen and photographed by HR and CF at São Vicente on the 22nd of February 2010. On two of the above mentioned occasions (Aug 2009 and Feb 2010) a bird was seen flying together with two Whimbrels, *N. p. phaeopus*.

Marsh Sandpiper, Tringa stagnatilis, (Bechstein, 1803)

One was seen and photographed on the 15th of April 2008 by HR and CF at the Lugar de Baixo pond, Madeira. The bird was seen together with a Greenshank, *T. nebularia*, which allowed for a comparison and consequently a positive identification.

Solitary Sandpiper, Tringa solitaria (Wilson, 1813) (Fig. 7)

One was seen and photographed by the Dutch birdwatchers Hans Schekkerman, Roef Mulder and Rommert Cazemier at the Lugar de Baixo pond, Madeira, on the morning of the 2nd of September 2010. Possibly the same bird was seen by HR and CF on the 11th of September at the river mouth, Machico.

Sharp-tailed Sandpiper, Calidris acuminata Horsfield, 1821 (Fig. 8)

One was seen and photographed on the 27th of August 2010 at the Lugar de Baixo pond, Madeira by Erik Mølgaard with a group of Danish birdwatchers. This record was confirmed on the same day by the authors (HR and CF).

Baltic Dunlin, Calidris alpina schinzii (Brehm, 1822)

Many specimens have been observed in Madeira over the years, confirming that this is one of the commonest waders passing through this area as already stated by BANNEMANN & BANNERMAN (1965). ZINO *et al.* (1995) do not list any subspecies of *C. alpina*. Re-checking the literature it was confirmed that both *C. a. alpina* and *C. a. schinzii* have been recorded from Madeira and specimens of both subspecies exist in the Natural History Museum of Funchal.



Fig. 7 - Solitary Sandpiper, *T. solitaria* at the mouth of Ribeira de Machico, Madeira, September 2nd, 2010.



Fig. 8 - Sharp-tailed Sandpiper, *C. acuminata* (on the left) and Pectoral Sandpiper, *C. melanotos* (on the right), at the Lugar de Baixo pond, Madeira, August 27th, 2010.

Buff-breasted Sandpiper, Tryngites subruficollis (Vieillot, 1819)

One was observed and photographed on the 8th of September 2006 at the Lugar de Baixo pond, Madeira, by HR and CF. This bird was last seen at the same place on the 24th of September.

Bonaparte's Gull, Chroicocephalus philadelphia (Ord, 1815) (Fig. 9)

A single specimen was observed and photographed in Funchal harbour by CF and HR from mid-February until the 28th of March 2007.



Fig. 9 - Bonaparte's Gull, C. philadelphia in Funchal harbour in February 2007.

Laughing Gull, Leucophaeus atricilla (Linnaeus, 1758) (Fig. 10)

Two were observed and photographed on the 25th of February 2006 in Funchal harbour, Madeira, by HR, CF and other birdwatchers. A second record was made in the same area by HR and CF on the 29th of December 2007.



Fig. 10 - Laughing Gull, L. atricilla in Funchal harbour, Madeira, December 29th, 2007.

Rose-ringed Parakeet, Psittacula krameri (Scopoli, 1769)

Seen frequently in Funchal. Although *P. k. krameri* occurs in West Africa (Southern Mauritania, Senegal and Guinea), these are almost certainly escaped cage birds. This species has been establishing new breeding populations in many European countries, as a result of introductions and escapees (SVENSSON *et al.*, 2009). It is a new record for Madeira.

Blue-cheeked Bee-eater, Merops persicus Pallas, 1773

Two were observed on the 26th of April 2008 at Caniçal, Madeira, by HR and two birdwatchers. The birds were mixed with Bee-eaters, *M. apiaster*, thus allowing a morphological comparison with the latter. Moreover, their recorded call was clearly distinct from *M. apiaster*. This observation followed a series of days with easterly winds ("Leste") blowing from the Sahara.

Hooded Crow, Corvus cornix cornix Linnaeus 1758

One was caught on the "Pontinha" (Funchal harbour wall), Madeira, on the 29th of December, 1962 (MMF 19458). This Museum specimen, was overlooked by ZINO *et al.* (1995), it is a new record for Madeira.

Woodlark, Lullula arborea (Linnaeus, 1758)

At least four were observed and photographed between 11th and 14th of February 2009 at Caniçal and Ponta de São Lourenço, Madeira, by HR and CF.

Iberian Chiffchaff, Phylloscopus ibericus Ticehurst, 1937

One was observed and photographed on Selvagem Grande on the 28th of September 2008 by FZ. This species can easily be distinguished from the Common Chiffchaff by its bright yellow front supercillium and yellowish body. This is a new record for the archipelago of the Selvagens.

Two-barred Warbler, Phylloscopus plumbeitarsus Swinhoe, 1861

One was photographed at Canhas, Madeira, on the 29th of April 2008 by Thijs Valkenburg.

Common Myna, Acridotheres tristis (Linnaeus, 1766)

A pair were observed and photographed at Quinta do Lorde Marina, Madeira, building a nest, on the 26th of June 2005, by HR and CF. This highly invasive species, native from Asia, has been increasing its breeding range and can be found breeding on Tenerife, Canary Islands (Svensson *et al.*, 2009). Apparently the observed pair did not succeed in breeding and no more observations have occurred since.

Greater Blue-eared Starling, Lamprotornis chalibaeus (Ehrenberg, 1828)

One was observed and photographed on the 18th of March 2008 at Caniçal, Madeira, by HR, CF and six birdwatchers. The bird was sitting still on a pole thus allowing a good observation. Easterly winds ("Leste") occurred the previous days, maybe explaining the presence of this African species. ZINO *et al.* (1995) give the record of *Lamprotornis* cf. *purpureus* from Funchal. A careful comparison of the photograph of this bird with the Greater Blue-eared Starling seen in 2008 led to the conclusion that both observations belong to the same species, *L. chalibaeus*. It is decided to withdraw *L. purpureus* from the list of records from Madeira.

Yellow-crowned Bishop, Euplectes afer (Gmelin, 1789)

One was observed on July 2008 at the Lugar de Baixo pond, Madeira, by Peter ter Heide. The same bird was observed and photographed at the same place by HR and CF on the 26th of August 2008.

Dunnock, Prunella modularis (Linnaeus, 1758)

One was observed and photographed on the 11th of July 2006 at Ponta do Pargo, Madeira, by Derek Charles and Lourenço Quintal.

Iberian Yellow Wagtail, Motacilla flava iberiae Hartert, 1921

One was observed and photographed at Ponta do Pargo, Madeira, on the 24th of April 2008 by HR and eight birdwatchers. ZINO *et al.*, (1995) list *Motacilla flava*, on the authority of NORONHA & SCHMITZ (1902). It is not possible to confirm which subspecies those authors handled, therefore it is assumed that they refer to the nominal subspecies *M. flava flava*.

Ashy-headed Wagtail, Motacilla flava cinereocapilla Savi, 1831

One was observed and photographed at Ponta do Pargo, Madeira, on the 5th of May 2009 by HR and CF, together with one *M. f. flava*.

Grey-headed Wagtail, Motacilla flava thunbergi Billberg, 1828

One was observed and photographed by FZ on Selvagem Grande on the 27th of April 2008.

Three days later (30-04-2008), another bird was observed and photographed at Porto Moniz, Madeira by HR and CF.

Pied Wagtail, Motacilla alba yarrellii (Gould, 1837)

Several birds were observed on the 14th February 2009 on a mixed group of Pied and White Wagtails with about 30 individuals, in gardens near the airport at Santa Cruz, Madeira, by CF and HR. On the 7th of March 2009 the authors confirmed there were still three *M. a. yarellii* together with 22 *M. alba alba*. ZINO *et al.*, (1995) list *Motacilla alba*, on the authority of HARCOURT (1851). It is not possible to confirm which subspecies Harcourt handled, therefore it is assumed that he refers to the nominal subspecies *M. alba alba*. There are two mounted specimens in MMF (MMF 7583; 7592), which have been identified only to specific level. These together with two others belonging to the nominal subspecies (MMF 7563; 7572) were seen by David Bannerman who at that time did not recognize the existence of the two subspecies (BANNERMAN & BANNERMAN, 1965).

Common Reed Bunting, Emberiza schoeniclus (Linnaeus, 1758)

One was observed and photographed on the 26th of October 2010 at the Lugar de Baixo pond, Madeira, by HR with other birdwatchers.

Additions of breeding species to the previous checklist (ZINO et al., 1995) and new record

Muscovy Duck, Cairina moschata (Linnaeus, 1758)

This common domestic duck has been found breeding in the wild in recent years, on river beds and ponds on Madeira, where people tend to feed them. Confirmed breeding records at Lugar de Baixo pond, Machico river mouth, Madeira and at Tanque, Porto Santo. This is a new record from Madeira and Porto Santo.

Mallard Anas platyrhynchos Linnaeus, 1758

Two pairs of Mallards with chicks were observed and photographed at Porto Santo's golf course on the 21st of May 2009 and on the 3rd of April 2010 by FZ and MB, respectively.

Moorhen, Gallinula chloropus (Linnaeus, 1758)

Breeding confirmed at Lugar de Baixo pond, Madeira and Porto Santo (FAGUNDES & NUNES, 2003).

Eurasian Coot Fulica atra Linnaeus, 1758

This common vagrant was confirmed breeding at the Lugar de Baixo pond, Madeira (FAGUNDES & ROMANO, 2009a). Adult Coots with juveniles were also observed at Porto Santo's golf course on the 21st of May 2009.

Common Waxbill, Estrilda astrild (Linnaeus, 1758)

This cage bird has been confirmed breeding on Porto Santo in 1978 and on Madeira in 1986 (CâMARA, 1997). Recently one of the authors (FZ) observed a group of 10 birds at his garden in Funchal, including chicks being fed by adults.

Eurasian Siskin, Carduelis spinus (Linnaeus, 1758)

Until 1995 there was only 1 record of this species from Madeira (ZINO et al., 1995).

The breeding of this species at Montado do Pereiro, on the mountains above Funchal, Madeira was confirmed by FAGUNDES *et al.* (2008).

The updated list of the breeding species in the archipelagos of Madeira and the Selvagens is presented in Table 3.

Possible breeding species

Little Ringed Plover, Charadrius dubius curonicus (Gmelin, 1789)

SCHMITZ (1907) was the first to establish the nesting of this subspecies in the archipelago of Madeira. Since then no more breeding records of this rare species have been reported, therefore it should be considered as possible breeder.

Eurasian Collared Dove, Streptopelia decaocto (Frivaldszky, 1838)

The Eurasian Collared Dove has become in recent years more and more common, both at Porto Santo and at Caniçal, Madeira, surpassing in numbers *S. turtur*. The latter has been confirmed breeding on Madeira (ZINO, 1991). Since *S. decaocto* is present all year round on the islands, it should be considered as a possible breeder.

The following species remain as possible breeders: Storm Petrel *Hydrobates pelagicus* (Linnaeus, 1758), Swinhoe's Storm Petrel, *Oceanodroma monorhis* (Swinhoe, 1867) and Mistle Thrush, *Turdus viscivorus* Linnaeus, 1758 (see comments in ZINO *et al.*, 1995).

Unconfirmed records

Common Merganser, Mergus merganser Linnaeus, 1758

One was reported by Tim Farr on the 18th of December 2010 from Porto Santo on Tanque pond, (TIM FARR, *in litt.*). Since no photograph or video record was taken, this record remains unconfirmed.

Magnificent Frigatebird, Fregata magnificens Mathews, 1914

One was seen off Porto Santo by Steve Porter and Roddie Mavor on the 8th of October 2008. According to the observer, this was either an immature or a female. As there is no photographic record, this recorded remains unconfirmed.

Bonelli's Eagle, Aquila fasciata (Vieillot, 1822)

One observed by HR and CF together with two other birdwatchers flying high over Machico, Madeira, on the 10th of January 2009. Despite the photographs a clear identification could not be made, therefore this remains an unconfirmed record.

TABLE 3 - List of the breeding birds of the Archipelago of Madeira, including the Selvagens.(* Endemic species; ** Endemic subspecies).

Alectoris rufa (LINNAEUS, 1758)	Reg-legged Partridge Perdiz	Columba trocaz
Coturnix coturnix coturnix (LINNAEUS, 1758)	Common Quail	Streptopelia turi
Cairina moschata Linnaeus, 1758	Codorniz Muskovy Duck Pato-do-mato	Tyto alba schmi
Anas platyrhynchos Linnaeus, 1758	Mallard Pato-real	Apus unicolor J.
Pterodroma madeira MATHEWS, 1934 *	Zino's Petrel Freira da Madeira	Apus pallidus bi
Pterodroma deserta MATHEWS, 1934 *	Desertas' Petrel Freira do Bugio	Upupa epops LI
Calonectris diomedea borealis (CORY, 1881)	Cory's Shearwater Cagarra	Sylvia atricapill
Puffinus puffinus (BRÜNNICH, 1764)	Manx Shearwater Patagarro	Sylvia conspicil
Puffinus baroli (BONAPARTE, 1857)	Barolo's Shearwater Pintaínho	Regulus madeire
Bulweria bulwerii (JARDINE & SELBY, 1828)	Bulwer's Petrel Alma-negra	Turdus merula c
Pelagodroma marina hypoleuca (WEBB, BERTHELOT & MOUQUIN TANDON), 1841	White-faced Storm-petrel Calcamar	Erithacus rubec
Oceanodroma castro (HARCOURT, 1851)	Madeiran Storm-petrel Roque-de-Castro	Passer hispanio
Accipiter nisus granti (LINNAEUS, 1758)	Eurasian Sparrowhawk Fura-bardos	Petronia petron
Buteo buteo (LINNAEUS, 1758)	Common Buzzard Manta	Estrilda astrild
Falco tinnunculus canariensis (KOENIG, 1890)	Canarian Kestrel Francelho	Motacilla cinere
Gallinula chloropus (LINNAEUS, 1758)	Common Moorhen Galinha d'Água	Anthus berthelo
Fulica atra LINNAEUS, 1758	Eurasian Coot Galeirão	Anthus berthelo
Charadrius alexandrinus LINNAEUS, 1758	Kentish Plover Rolinha da Praia	Fringilla coeleb
Scolopax rusticola LINNAEUS, 1758	Eurasian Woodcock Galinhola	Serinus canaria
Larus michahellis NAUMANN, 1840	Yellow-legged Gull Gaivota de patas amarelas	Carduelis chlor
Onychoprion fuscatus (LINNAEUS, 1766)	Sooty Tern Garajau escuro	Carduelis spinu
Sterna dougallii MONTAGU, 1813	Roseate Tern Garajau rosado	Carduelis cardı
Sterna hirundo LINNAEUS, 1758	Common Tern Garajau comun	Carduelis canno
Columba livia GMELIN, 1789	Common Pigeon Pombo da rocha	

Columba trocaz HEINEKEN, 1829 *	Trocaz Pigeon
	Pombo trocaz
Streptopelia turtur LINNAEUS, 1758	European Turtle Dove
* * /	Rôla Western Barn Owl
Tyto alba schmitzi HARTERT, 1900 **	
-	Coruja Plain Swift
Apus unicolor JARDINE, 1830	Andorinha
	Pallid Swift
Apus pallidus brehmorum HARTERT, 1901	Andorinha
Upupa epops LINNAEUS, 1758	Eurasian Hoopoe
	Poupa Eurasian Blackcap
Sylvia atricapilla heineken (JARDINE, 1830)	Toutinegra
	Spectacled Warbler
Sylvia conspicillata orbitalis (WAHLBERG, 1854)	Cigarrinho
	Madeira Firecrest
Regulus madeirensis HARCOURT, 1851 *	Bis-bis
	Common Blackbird
Turdus merula cabrerae HARTERT, 1901	Melro preto
Erithacus rubecula rubecula (LINNAEUS, 1758)	European Robin Papinho
	Spanish Sparrow
Passer hispaniolensis TEMMINCK, 1820	Pardal espanhol
	Rock Sparrow
Petronia petronia petronia (LINNAEUS, 1766)	Pardal da terra
	Common Waxbill
Estrilda astrild (LINNAEUS, 1758)	Bico de Lacre
	Madeiran Grey Wagtail
Motacilla cinerea schmitzi TSCHUSI, 1900 **	Lavandeira
	Berthelot's Pipit
Anthus berthelotii berthelotii BOLLE, 1862	Corre-caminhos
	Madeiran Berthelot's Pipit
Anthus berthelotii madeirensis HARTERT, 1905 **	Corre-caminhos da Madeira
	Madeiran Chaffinch
Fringilla coelebs maderensis SHARPE, 1888 **	Tentilhão
	Atlantic Canary
Serinus canaria (LINNAEUS, 1758)	Canário da terra
	European Greenfinch
Carduelis chloris (LINNAEUS, 1758)	Verdilhão
	Eurasian Siskin
Carduelis spinus (LINNAEUS, 1758)	Lugre
	European Goldfinch
Carduelis carduelis parva TSCHUSI, 1901	Pintassilgo
	Common Linnet
Carduelis cannabina guentheri WOLTERS, 1953	Pintarroxo

Dubious records

The following species remain as dubious records:

Black-throated Diver, *Gavia arctica* (Linnaeus, 1758), Soft-plumaged Petrel, *Pterodroma mollis* (Gould, 1844), Long-eared Owl, *Asio otus* (Linnaeus, 1758), Blue Rock Thrush, *Monticola solitarius* (Linnaeus, 1758), Zitting Cisticola, *Cisticola juncidis* (Rafinesque, 1810), Carrion Crow, *Corvus corone* Linnaeus, 1758, Brown-necked Raven, *Corvus ruficolis* Lesson, 1830 and Black-winged Red Bishop *Euplectes hordeaceus* (Linnaeus, 1758) (see comments in ZINO *et al.*, 1995).

REMARKS (on previously recorded species)

Museum specimens of the following species which were not mentioned in ZINO *et al.* (1995) are in fact present in the MMF collection:

Eurasian Wigeon, *Anas penelope* Linnaeus, 1758 (MMF 24841); Common Pochard, *Aythya ferina* (Linnaeus, 1758) (MMF 24256; 31480); Black-necked Grebe, *Podiceps nigricollis* Brehm, 1831 (MMF 854); Hawfinch, *Coccothraustes coccothraustes* (Linnaeus, 1758) (MMF 20384); Woodchat Shrike, *Lanius senator* Linnaeus, 1758 (MMF 23012); Common Chiffchaff, *Phylloscopus collybita* (Vieillot, 1817) (MMF 754); Song Thrush, *Turdus philomelos* Brehm, 1831 (MMF 739).

Common Quail, Coturnix coturnix coturnix (Linnaeus, 1758)

GUYOMARC'H *et al.* (1998) do not accept the subspecies *C. c. confisa* Hartert, 1917 considering that nominal subspecies is the form occurring in the archipelago of Madeira. Considering that in Madeira there is a breeding population, a regular influx of vagrants as well as the release of birds bred in captivity for hunting purposes, and that quail of different forms are known to hybridize (GUYOMARC'H *et al.*, 1998) an in depth study using gene sequencing should be undertaken.

Fea's Petrel, *Pterodroma feae* (Salvadori, 1899) / Desertas' Petrel, *P. deserta* Mathews, 1934

The taxonomic status of the three *Pterodroma* taxa breeding in the Macaronesian islands has been subject of long debate. ZINO *et al.* (2008) clearly established the separation of *P. madeira* (Mathews, 1934) from *P. feae* (Salvadori, 1899) of the Bugio (Desertas) island. JESUS *et al.* (2009) while studying the phylogenetic relationships of the genus *Pterodroma* in the Northeast Atlantic found differences between the taxa breeding on Bugio and on Fogo, Cape Verde, pointing that the two taxa should be regarded as different species, *P. deserta*

breeding on Bugio and *P. feae* breeding in the Cape Verde archipelago. In addition, the Bugio and Cape Verde forms show morphological differences and have different breeding seasons (BANNERMAN & BANNERMAN, 1968; ZINO & ZINO, 1986; JESUS *et al.*, 2009) and there is no evidence of birds from Cape Verde being caught in the Desertas and vice-versa (JESUS *et al.*, 2009). In view of all this, it is accepted that the taxa breeding on Bugio is *P. deserta* (Mathews, 1934), another endemic species from the archipelago of Madeira.

A checklist of the birds of Madeira and the Selvagens is given in Table 4.

AKNOWLEDGEMENTS

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TABLE 4 - Checklist of the Birds of Madeira, including the Selvagens. (* Recorded only from the Selvagens; ** Breeds only in the Selvagens. Breeding and possible breeding species in bold; N = No; Y = Yes; ? = Possible).

Scientific name	English name	Specimen in MMF	Breeder	Original reference	Frequency or abundance
NUMIDIDAE					
Numida meleagris	Helmeted Guineafowl	N	Ν	SARMENTO, 1936	Extinct
PHASIANIDAE					
Alectoris barbara	Barbary Partridge	N	Ν	SARMENTO, 1936	Extinct
Alectoris rufa	Reg-legged Partridge	Y	Y	SLOANE, 1707	Common
Coturnix coturnix coturnix	Common Quail	Y	Y	HARCOURT, 1851	Rare
Phasianus colchicus	Common Pheasant	N	N	SLOANE, 1707	Extinct
Pavo cristatus	Indian Peafowl	N	Ν	SLOANE, 1707	Extinct
ANATIDAE					
Anser fabalis	Taiga Bean Goose	N	Ν	HARCOURT, 1851	Exceptional
Anser brachyrhynchus	Pink-footed Goose	Y	Ν	BANNERMAN & BANNERMAN, 1965	Exceptional
Anser anser	Grey-lag Goose	Y	Ν	SCHMITZ, 1896b	Exceptional
Anser albifrons	Greater White-fronted Goose	Y	Ν	SCHMITZ, 1908a	Exceptional
Branta bernicla	Brant Goose	N	N	TAROZZI, 2006	Exceptional
Tadorna tadorna	Common Shelduck	Y	Ν	MAUL, 1948	Only 1 record
Tadorna ferruginea	Ruddy Shelduck	Y	Ν	MAUL, 1948	Exceptional
Cairina moschata	Muscovy Duck	N	Y	New record	Rare
Aix sponsa	Wood Duck	N	Ν	FAGUNDES & ROMANO, 2009b	Only 1 record
Anas strepera	Gadwall	Y	Ν	FAGUNDES & ROMANO, 2006a	Occasional
Anas penelope	Eurasian Wigeon	Y	Ν	HARCOURT, 1851	Exceptional
Anas americana	American Wigeon	N	N	FAGUNDES & ROMANO, 2008a	Seasonal
Anas platyrhynchus	Mallard	Y	Y	HARCOURT, 1851	Rare
Anas discors	Blue-winged Teal	N	Ν	FAGUNDES & ROMANO, 2008b	Only 1 record
Anas clypeata	Northern Shoveler	N	Ν	SCHMITZ, 1905	Exceptional
Anas acuta	Northern Pintail	Y	Ν	SCHMITZ, 1896a	Occasional
Anas crecca	Eurasian Teal	Y	Ν	HARCOURT, 1851	Seasonal
Anas carolinensis	Green-winged Teal	N	Ν	FAGUNDES & ROMANO, 2007a	Exceptional
Marmaronetta angustirostris	Marbled Duck	N	Ν	SCHMITZ, 1899	Only 1 record
Aythya ferina	Common Pochard	Y	Ν	SCHMITZ, 1905	Exceptional
Aythya collaris	Ring-necked Duck	Y	Ν	ZINO et al., 1995	Exceptional
Aythia fuligula	Tufted Duck	N	Ν	SCHMITZ, 1908a	Exceptional
Aythya marila	Greater Scaup	N	Ν	ZINO et al., 1995	Exceptional
Melanitta perspicillata	Surf Scoter	Y	Ν	ZINO et al., 1995	Only 1 record

Scientific name	English name	Specimen in MMF	Breeder	Original reference	Frequency or abundance
Melanitta nigra	Common Scoter	Y	Ν	SCHMITZ, 1899	Exceptional
Clangula hyemalis	Long-tailed Duck	N	Ν	SCHMITZ, 1909	Only 1 record
Bucephala clangula	Common Goldeneye	N	Ν	SARMENTO, 1936	Exceptional
Mergus merganser	Common Merganser	N	Ν	FARR, in litt	Unconfirmed
Mergus serrator	Red-breasted Merganser	N	Ν	SCHMITZ, 1908b	Only 1 record
GAVIIDAE					
Gavia arctica	Black-throated Loon	N	Ν	SARMENTO, 1936	Dubious record
Gavia immer	Great Northern Loon	Y	Ν	HARCOURT, 1851	Seasonal
PROCELLARIIDAE					
Fulmarus glacialis	Northern Fulmar	Y	Ν	SHIRIHAI, 2008	Exceptional
Pterodroma mollis	Soft-plumaged Petrel	N	Ν	JEPSON & ZONFRILLO, 1988	Dubious record
Pterodroma madeira	Zino's Petrel	Y	Y	SCHMITZ, 1905	Very rare
Pterodroma deserta	Desertas' Petrel	Y	Y	DALGLEISH, 1891	Rare
Calonectris diomedea diomedea	Scopoli's Shearwater	N	Ν	FAGUNDES & ROMANO, 2010a	Occasional
Calonectris diomedea borealis	Cory's Shearwater	Y	Y	HARCOURT, 1851	Very common
Puffinus puffinus puffinus	Manx Shearwater	Y	Y	HARCOURT, 1851	Common
Puffinus mauretanicus	Balearic Shearwater	N	Ν	JEPSON & ZONFRILLO, 1988	Exceptional
Puffinus baroli	Borolo's Shearwater	Y	Y	HARCOURT, 1851	Rare
Puffinus griseus	Sooty shearwater	N	Ν	AUDENHOVE & AUDENHOVE, 2005	Occasional
Puffinus gravis	Great Shearwater	N	Ν	SARMENTO, 1936	Seasonal
Bulweria bulwerii	Bulwer's Petrel	Y	Y	JARDINE & SELBY, 1828	Very common
HYDROBATIDAE					
Oceanites oceanicus	Wilson's Storm-petrel	N	Ν	DALGLEISH, 1890	Seasonal
Pelagodroma marina hypoleuca	White-faced Storm-petrel	Y	Y	OGILVIE-GRANT, 1896	Common**
Hydrobates pelagicus	European Storm Petrel	Y	?	BANNERMAN, 1914	Very rare
Oceanodroma castro	Madeiran Storm-petrel	Y	Y	HARCOURT, 1851	Common
Oceanodroma monorhis	Swinhoe's Storm-petrel	N	?	JAMES & ROBERTSON, 1985	Very rare
Oceanodroma leucorhoa	Leach's Strom-petrel	N	Ν	HARCOURT, 1851	Seasonal
PODICIPEDIDAE					
Tachybaptus ruficollis	Little Grebe	N	Ν	MAUL, 1948	Exceptional
Podiceps auritus	Horned Grebe	N	Ν	SCHMITZ, 1899	Exceptional
Podiceps nigricollis	Black-necked Grebe	Y	Ν	SCHMITZ, 1908a	Exceptional
PHAETHONTIDAE					
Phaethon aethereus	Red-billed Tropicbird	Y	Ν	SCHMITZ, 1894	Exceptional

Scientific name	English name	Specimen in MMF	Breeder	Original reference	Frequency or abundance
CICONIIDAE					
Ciconia nigra	Black Stork	N	Ν	HARCOURT, 1851	Exceptional
Ciconia ciconia	White Stork	Y	Ν	SCHMITZ, 1899	Exceptional
THRESKIORNITHIDAE					
Plegadis falcinellus	Glossy Ibis	Y	Ν	SCHMITZ, 1899	Exceptional
Platalea leucorodia	Eurasian Spoonbill	Y	Ν	SCHMITZ, 1896a	Occasional
ARDEIDAE					
Botaurus stellaris	Eurasian Bittern	Y	Ν	HARCOURT, 1851	Occasional
Ixobrychus minutus	Little Bittern	Y	Ν	HARCOURT, 1851	Occasional
Nycticorax nycticorax	Black-crowned Night Heron	Y	N	HARCOURT, 1851	Occasional
Butorides virescens	Green Heron	N	Ν	MATIAS, 2010	Only 1 record
Ardeola ralloides	Squacco Heron	Y	Ν	SCHMITZ, 1899	Occasional
Bubulcus ibis	Western Cattle Egret	Y	Ν	SCHMITZ, 1899	Occasional
Ardea cinerea	Grey Heron	Y	Ν	HARCOURT, 1851	Frequent
Ardea purpurea	Purple Heron	Y	Ν	HARCOURT, 1851	Occasional
Egretta garzetta	Little Egret	Y	Ν	SCHMITZ, 1899	Frequent
Egretta gularis	Western Reef Heron	N	Ν	SCHMITZ, 1903	Only 1 record
FREGATIDAE					
Fregata magnificens	Magnificent Frigatebird	N	Ν	PORTER & MAVOR, 2008	Unconfirmed
SULIDAE					
Morus bassanus	Northern Gannet	Y	Ν	SCHMITZ, 1899	Occasional
Sula leucogaster	Brown Booby	N	Ν	BERLIJN, 2009	Exceptional
PHALACROCORACIDAE					
Phalacrocorax aristotelis	European Shag	N	Ν	ZINO et al., 1995	Exceptional
Phalacrocorax carbo	Great Cormorant	Y	Ν	SCHMITZ, 1897a	Occasional
PANDIONIDAE					
Pandion haliaetus	Western Osprey	N	Ν	SCHMITZ, 1903	Occasional
ACCIPITRIDAE					
Pernis apivorus	European Honey Buzzard	N	Ν	SWASH, 1986	Only 1 record
Milvus milvus	Red Kite	N	Ν	SARMENTO, 1936	Exceptional
Milvus migrans	Black Kite	N	Ν	FOLMER & ORTVAD, 1992	Occasional
Neophron percnopterus	Egyptian Vulture	N	Ν	HARCOURT, 1851	Exceptional
Circus aeruginosus	Western Marsh Harrier	N	Ν	SILVEIRA & SCHMITZ, 1910	Exceptional
Circus pygargus	Montagu's Harrier	Y	Ν	MAUL, 1948	Occasional

Scientific name	English name	Specimen in MMF	Breeder	Original reference	Frequency or abundance
Accipiter nisus granti	Eurasian Sparrowhawk	Y	Y	FORSTER, 1777	Rare
Buteo buteo buteo	Common Buzzard	Y	Y	HARCOURT, 1851	Common
Buteo rufinus	Long-legged Buzzard	N	Ν	MOUGIN et al., 1987	Exceptional
Aquila fasciata	Bonelli's Eagle	N	Ν	FAGUNDES & ROMANO, 2009c	Unconfirmed
Hieraaetus pennatus	Booted Eagle	N	Ν	TAYLOR, 2008	Occasional
FALCONIDAE					
Falco naumanni	Lesser Kestrel	N	Ν	SWASH, 1986	Exceptional
Falco tinnunculus tinnunculus	Common Kestrel	Y	Ν	BANNERMAN & BANNERMAN, 1965	Occasional
Falco tinnunculus canariensis	Canarian Kestrel	Y	Y	HARCOURT, 1851	Common
Falco vespertinus	Red-footed Falcon	N	Ν	SARMENTO, 1936	Occasional
Falco eleonorae	Eleonora's Falcon	N	Ν	MOUGIN et al., 1987	Occasional
Falco columbarius	Merlin	N	Ν	SARMENTO, 1906	Exceptional
Falco subbuteo	Eurasian Hobby	Y	Ν	GODMAN, 1872	Occasional
Falco peregrinus	Peregrine Falcon	N	N	ZINO et al., 1995	Occasional
Falco pelegrinoides	Barbary Falcon	N	Ν	MOUGIN et al., 1987	Occasional
OTIDIDAE					
Tetrax tetrax	Little Bustard	N	Ν	SCHMITZ, 1899	Exceptional
RALLIDAE					
Rallus aquaticus	Water Rail	N	Ν	NORONHA & SCHMITZ, 1904	Only 1 record
Crex crex	Corn Crake	Y	Ν	HARCOURT, 1851	Exceptional
Porzana parva	Little Crake	N	Ν	SARMENTO, 1936	Exceptional
Porzana pusilla	Baillon's Crake	N	Ν	HARCOURT, 1851	Exceptional
Porzana porzana	Spotted Crake	Y	Ν	SCHMITZ, 1899	Exceptional
Porzana carolina	Sora	N	Ν	FAGUNDES & ROMANO, 2006b	Only 1 record
Porphyrio porphyrio	Purple Swamphen	N	Ν	SARMENTO, 1936	Occasional
Porphyrio alleni	Allen's Gallinule	Y	Ν	SCHMITZ, 1908a	Exceptional
Porphyrio martinica	Purple Gallinule	Y	Ν	ZINO et al., 1995	Exceptional
Gallinula chloropus	Common Moorhen	Y	Y	HARCOURT, 1851	Rare
Gallinula angulata	Lesser Morhen	N	Ν	MATIAS, 2009	Only 1 record
Fulica atra	Eurasian Coot	Y	Y	HARCOURT, 1851	Rare
GRUIDAE					
Grus grus	Common Crane	N	Ν	ZINO et al., 1995	Exceptional
BURHINIDAE					
Burhinus oedicnemus	Eurasian Stone-curlew	Y	Ν	HARCOURT, 1851	Exceptional

Scientific name	English name	Specimen in MMF	Breeder	Original reference	Frequency or abundance
HAEMATOPODIDAE					
Haematopus moquini	African Oystercatcher	N	Ν	SARMENTO, 1936	Only 1 record
Haematopus ostralegus	Eurasian Oystercatcher	Y	Ν	NORONHA & SCHMITZ, 1902	Occasional
RECURVIROSTRIDAE					
Himantopus himantopus	Black-winged Stilt	Y	Ν	SCHMITZ, 1899	Exceptional
Recurvirostra avosetta	Pied Avocet	Y	Ν	BANNERMAN & BANNERMAN, 1965	Occasional
CHARADRIIDAE					
Vanellus vanellus	Northern Lapwing	Y	Ν	HARCOURT, 1851	Seasonal
Pluvialis apricaria	European Golden Plover	Y	Ν	HARCOURT, 1851	Exceptional
Pluvialis fulva	Pacific Golden Plover	N	Ν	FAGUNDES & ROMANO, 2010b	Only 1 record
Pluvialis dominica	American Golden Plover	N	Ν	ROZEMEIJER, 2008	Only 1 record
Pluvialis squatarola	Grey Plover	Y	Ν	SCHMITZ, 1899	Occasional
Charadrius hiaticula	Common Ringed Plover	Y	Ν	HARCOURT, 1851	Occasional
Charadrius dubius curonicus	Little Ringed Plover	N	?	OGILVIE-GRANT, 1896	Very Rare
Charadrius vociferus	Killdeer	N	Ν	JOHNSON, 1885	Exceptional
Charadrius alexandrinus	Kentish Plover	Y	Y	SCHMITZ, 1894	Rare
Charadrius morinellus	Eurasian Dotterel	Y	Ν	MAUL, 1948	Occasional
SCOLOPACIDAE					
Scolopax rusticola	Eurasian Woodcock	Y	Y	HEINEKEN, 1832	Common
Lymnocryptes minimus	Jack Snipe	Y	N	SCHMITZ, 1899	Occasional
Gallinago media	Great Snipe	N	N	HARCOURT, 1851	Occasional
Gallinago gallinago	Common Snipe	Y	N	HARCOURT, 1851	Seasonal
Limnodromus sp.	Dowitcher	N	N	JENSEN, 1981	Only 1 record*
Limosa limosa	Black-tailed Godwit	Y	Ν	HARCOURT, 1851	Occasional
Limosa lapponica	Bar-tailed Godwit	Y	Ν	SCHMITZ, 1897b	Occasional
Numenius phaeopus phaeopus	Whimbrel	Y	Ν	HARCOURT, 1851	Seasonal
Numenius phaeopus hudsonicus	Hudsonian Whimbrel	N	Ν	RENDEL, 2008	Occasional
Numenius arquata	Eurasian Curlew	Y	Ν	HARCOURT, 1851	Occasional
Bartramia longicauda	Upland Sandpiper	Y	Ν	ZINO et al., 1995	Exceptional
Tringa erythropus	Spotted Redshank	Y	Ν	MEINERTZHAGEN, 1925	Exceptional
Tringa totanus	Common Redshank	Y	Ν	SCHMITZ, 1899	Occasional
Tringa stagnatilis	Marsh Sandpiper	N	Ν	FAGUNDES & ROMANO, 2008c	Only 1 record
Tringa nebularia	Common Greenshank	N	Ν	HARCOURT, 1851	Occasional
Tringa flavipes	Lesser Yellowlegs	N	Ν	ZINO et al., 1995	Exceptional

Scientific name	English name	Specimen in MMF	Breeder	Original reference	Frequency or abundance
Tringa ochropus	Green Sandpiper	Y	Ν	SARMENTO, 1936	Occasional
Tringa solitaria	Solitary Sandpiper	N	N	SCHEKKERMAN, MUDER & CAZEMIER,	Only 1 record
Tringa glareola	Wood Sandpiper	N	Ν	SCHMITZ, 1900	Occasional
Actitis hypoleucos	Common Sandpiper	Y	Ν	HARCOURT, 1851	Seasonal
Actitis macularia	Spotted Sandpiper	N	Ν	BANNERMAN & BANNERMAN, 1965	Occasional
Arenaria interpres	Ruddy Turnstone	Y	Ν	HARCOURT, 1851	Frequent
Calidris canutus	Red Knot	Y	Ν	HARCOURT, 1851	Seasonal
Calidris alba	Sanderling	Y	Ν	HARCOURT, 1851	Seasonal
Calidris pusilla	Semipalmated Sandpiper	N	Ν	ZINO et al., 1995	Exceptional
Calidris mauri	Western Sandpiper	Y	Ν	ZINO et al., 1995	Exceptional
Calidris minuta	Little Stint	N	Ν	BANNERMAN & BANNERMAN, 1965	Occasional
Calidris fuscicollis	White-rumped Sandpiper	Y	Ν	ZINO et al., 1995	Exceptional
Calidris melanotos	Pectoral Sandpiper	N	Ν	BANNERMAN & BANNERMAN, 1965	Occasional
Calidris acuminata	Sharp-tailed Sandpiper	N	Ν	MØLGAARD, 2010	Only 1 record
Calidris ferruginea	Curlew Sandpiper	Y	Ν	BANNERMAN & BANNERMAN, 1965	Seasonal
Calidris maritima	Purple Sandpiper	N	Ν	SILVEIRA & SCHMITZ, 1910	Exceptional
Calidris alpina alpina	Dunlin	Y	Ν	HARCOURT, 1851	Seasonal
Calidris alpina schinzii	Baltic Dunlin	Y	Ν	MEINERTZHAGEN, 1925	Seasonal
Tryngites subruficollis	Buff-breasted Sandpiper	N	Ν	FAGUNDES & ROMANO, 2006c	Exceptional
Philomachus pugnax	Ruff	Y	Ν	HARCOURT, 1851	Occasional
Phalaropus tricolor	Wilson's Phalarope	N	Ν	SILVEIRA & SCHMITZ, 1910	Exceptional
Phalaropus lobatus	Red-necked Phalarope	N	Ν	HOLMES, 1939	Only 1 record
Phalaropus fulicarius	Red Phalarope	Y	Ν	SCHMITZ, 1899	Exceptional
GLAREOLIDAE					
Cursorius cursor	Cream-coloured Courser	N	Ν	SCHMITZ, 1903	Only 1 record
Glareola pratincola	Collared Pratincole	Y	Ν	SARMENTO, 1936	Exceptional
LARIDAE					
Rissa tridactyla	Black-legged Kittiwake	Y	Ν	HARCOURT, 1851	Occasional
Xema sabini	Sabine's Gull	N	Ν	ZINO et al., 1995	Occasional
Chroicocephalus philadelphia	Bonaparte's Gull	N	Ν	FAGUNDES & ROMANO, 2007b	Exceptional
Chroicocephalus ridibundus	Black-headed Gull	Y	Ν	SARMENTO, 1936	Seasonal
Hydrocoloeus minutus	Little Gull	N	Ν	ZINO et al., 1995	Exceptional
Leucophaeus atricilla	Laughing Gull	N	Ν	FAGUNDES & ROMANO, 2006d	Exceptional
Leucophaeus pipixcan	Franklin's Gull	N	Ν	HOOGENDOORN & STEINHAUS, 1990	Exceptional

Scientific name	English name	Specimen in MMF	Breeder	Original reference	Frequency or abundance
Ichthyaetus melanocephalus	Mediterranean Gull	N	Ν	BANNERMAN & BANNERMAN, 1965	Seasonal
Ichthyaetus ichthyaetus	Pallas' Gull	N	Ν	LOWE, 1934	Only 1 record
Larus canus	Mew Gull	N	Ν	SILVEIRA & SCHMITZ, 1910	Occasional
Larus delawarensis	Ring-billed Gull	N	Ν	BOURNE, 1984	Occasional
Larus marinus	Great Black-backed Gull	Y	Ν	SCHMITZ, 1899	Occasional
Larus hyperboreus	Glaucous Gull	Y	Ν	SCHMITZ, 1905	Exceptional
Larus glaucoides	Iceland Gull	Y	Ν	SCHMITZ, 1908a	Occasional
Larus argentatus	European Herring Gull	N	N	SWASH, 1986	Occasional
Larus michahellis	Yellow-legged Gull	Y	Y	HARCOURT, 1851	Very Common
Larus fuscus	Lesser Black-backed Gull	N	Ν	SCHMITZ, 1899	Frequent
Gelochelidon nilotica	Gull-billed Tern	N	Ν	SCHMITZ, 1900	Exceptional
Hydroprogne caspia	Caspian Tern	N	Ν	ZINO et al., 1995	Exceptional
Thalasseus sandvicensis	Sandwich Tern	N	Ν	SCHMITZ, 1897a	Occasional
Sternula albifrons	Little Tern	N	Ν	GODMAN, 1872	Exceptional
Onychoprion fuscatus	Sooty Tern	N	Y	ROUX, 1983	Very Rare
Sterna dougallii	Roseate Tern	Y	Y	OGILVIE-GRANT, 1890	Rare
Sterna hirundo	Common Tern	Y	Y	HARCOURT, 1851	Common
Sterna paradisaea	Arctic Tern	N	Ν	SWASH, 1986	Seasonal
Chlidonias hybrida	Whiskered Tern	Y	Ν	BANNERMAN & BANNERMAN, 1965	Exceptional
Chlidonias leucopterus	White-winged Tern	N	Ν	BANNERMAN & BANNERMAN, 1965	Only 1 record
Chlidonias niger	Black Tern	Y	Ν	HARCOURT, 1851	Exceptional
STERCORARIIDAE					
Stercorarius skua	Great Skua	Y	Ν	HARCOURT, 1851	Frequent
Stercorarius pomarinus	Pomarine Skua	N	Ν	SCHMITZ, 1899	Seasonal
Stercorarius parasiticus	Parasitic Jaeger	N	Ν	SCHMITZ, 1899	Seasonal
Stercorarius longicaudus	Long-tailed Jaeger	N	Ν	ZINO et al., 1995	Seasonal
ALCIDAE					
Alle alle	Little Auk	Y	Ν	MAUL, 1948	Exceptional
Fratercula arctica	Atlantic Puffin	Y	Ν	SCHMITZ, 1899	Exceptional
COLUMBIDAE					
Columba livia	Common Pigeon	Y	Y	HARCOURT, 1851	Common
Columba palumbus palumbus	Common Woodpigeon	N	Ν	MOUGIN et al., 1987	Exceptional
Columba palumbus maderensis	Madeiran Woodpigeon	Y	Ν	HARCOURT, 1851	Extinct
Columba trocaz	Trocaz Pigeon	Y	Y	CA' DA MOSTO, 1455	Common

Scientific name	English name	Specimen in MMF	Breeder	Original reference	Frequency or abundance
Streptopelia turtur	European Turtle Dove	Y	Y	ZINO, 1991	Rare
Streptopelia decaocto	Eurasian Collared Dove	N	?	FOLMER & ORTVAD, 1992	Rare
PSITTACIDAE					
Psittacula krameri	Rose-ringed Parakeet	N	Ν	New record	Occasional
CUCULIDAE					
Clamator glandarius	Great Spotted Cuckoo	Y	Ν	BANNERMAN & BANNERMAN, 1965	Exceptional
Cuculus canorus	Common Cuckoo	Y	Ν	HARCOURT, 1851	Occasional
TYTONIDAE					
Tyto alba schmitzi	Western Barn Owl	Y	Y	HARCOURT, 1851	Rare
STRIGIDAE					
Otus scops	Eurasian Scops Owl	Y	Ν	SCHMITZ, 1899	Occasional
Asio otus	Long-eared Owl	N	Ν	GODMAN, 1872	Dubious record
Asio flammeus	Short-eared Owl	Y	Ν	OGILVIE-GRANT, 1896	Occasional
CAPRIMULGIDAE					
Caprimulgus ruficollis	Red-necked Nightjar	N	Ν	NORONHA & SCHMITZ, 1902	Only 1 record
Caprimulgus europaeus	European Nightjar	N	Ν	HARCOURT, 1851	Exceptional
APODIDAE					
Tachymarptis melba	Alpine Swift	Y	Ν	NORONHA & SCHMITZ, 1902	Occasional
Apus apus	Common Swift	N	Ν	SCHINDLER, 1960	Seasonal
Apus unicolor	Plain Swift	Y	Y	JARDINE, 1830	Common
Apus pallidus brehmorum	Pallid Swift	Y	Y	HARCOURT, 1851	Common
Apus affinis	Little Swift	N	Ν	MOUGIN et al., 1987	Only 1 record
CORACIIDAE					
Coracias garrulus	European Roller	Y	Ν	SARMENTO, 1936	Exceptional
ALCEDINIDAE					
Alcedo atthis	Common Kingfisher	Y	Ν	HARCOURT, 1851	Exceptional
MEROPIDAE					
Merops persicus	Blue-cheeked Bee-eater	N	Ν	FAGUNDES & ROMANO, 2008e	Only 1 record
Merops apiaster	European Bee-eater	Y	Ν	HARCOURT, 1851	Occasional
UPUPIDAE					
Upupa epops	Eurasian Hoopoe	Y	Y	BANNERMAN & BANNERMAN, 1965	Common
PICIDAE					
Jynx torquilla	Eurasian Wryneck	Y	Ν	SCHMITZ, 1897a	Exceptional

Scientific name	English name	Specimen in MMF	Breeder	Original reference	Frequency or abundance
LANIIDAE					
Lanius collurio	Red-backed Shrike	N	Ν	CÂMARA & TEIXEIRA, 1980	Only 1 record*
Lanius senator	Woodchat Shrike	Y	Ν	SCHMITZ, 1899	Occasional
ORIOLIDAE					
Oriolus oriolus	Eurasian Golden Oriole	Y	Ν	HARCOURT, 1851	Exceptional
CORVIDAE					
Coloeus monedula	Western Jackdaw	Y	Ν	SARMENTO, 1936	Only 1 record
Corvus frugilegus	Rook	N	Ν	SCHMITZ, 1903	Only 1 record
Corvus corone	Carrion Crow	N	Ν	FORSTER, 1777	Dubious record
Corvus cornix cornix	Hooded Crow	Y	Ν	New record	Only 1 record
Corvus ruficollis	Brown-necked Raven	N	Ν	SCHMITZ, 1899	Dubious record
Corvus corax	Northern Raven	N	Ν	HARCOURT, 1851	Exceptional
ALAUDIDAE					
Melanocorypha calandra	Calandra Lark	Y	Ν	BANNERMAN & BANNERMAN, 1965	Occasional
Calandrella brachydactyla	Greater Short-toed Lark	N	Ν	ZINO et al., 1995	Occasional
Lullula arborea	Woodlark	N	Ν	FAGUNDES & ROMANO, 2009d	Exceptional
Alauda arvensis	Eurasian Skylark	Y	Ν	FORSTER, 1777	Occasional
HIRUNDINIDAE					
Riparia riparia	Sand Martin	N	Ν	OGILVIE-GRANT, 1896	Exceptional
Hirundo rustica	Barn Swallow	Y	Ν	GODMAN, 1872	Seasonal
Ptyonoprogne rupestris	Eurasian Crag Martin	N	Ν	MOUGIN et al., 1987	Exceptional
Delichon urbicum	Common House Martin	Y	Ν	HARCOURT, 1851	Seasonal
Cecropis daurica	Red-rumped Swallow	N	Ν	BACALLADO & OROMI, 1978	Seasonal
PHYLLOSCOPIDAE					
Phylloscopus trochilus	Willow Warbler	N	Ν	SCHMITZ, 1897a	Occasional
Phylloscopus collybita	Common Chiffchaff	Y	Ν	SCHMITZ, 1897a	Occasional
Phylloscopus ibericus	Iberian Chiffchaff	N	Ν	New record	Only 1 record*
Phylloscopus bonelli	Western Bonelli's Warbler	N	Ν	SCHMITZ, 1909	Exceptional
Phylloscopus sibilatrix	Wood Warbler	Y	Ν	OGILVIE-GRANT, 1890	Exceptional
Phylloscopus inornatus	Yellow-browed Warbler	N	Ν	SCHMITZ, 1900	Exceptional
Phylloscopus plumbeitarsus	Two-barred Warbler	N	Ν	VALKENBURG, 2008	Only 1 record
ACROCEPHALIDAE					
Acrocephalus arundinaceus	Great Reed Warbler	Y	Ν	SARMENTO, 1936	Exceptional
Acrocephalus schoenobaenus	Sedge Warbler	N	Ν	SCHMITZ, 1905	Exceptional

Scientific name	English name	Specimen in MMF	Breeder	Original reference	Frequency or abundance
Acrocephalus scirpaceus	Eurasian Reed Warbler	Ν	Ν	SCHMITZ, 1905	Occasional
Acrocephalus palustris	Marsh Warbler	N	Ν	SCHMITZ, 1908a	Exceptional
Iduna pallida	Eastern Olivaceous Warbler	N	Ν	MOUGIN et al., 1987	Exceptional*
Hippolais polyglotta	Melodious Warbler	N	Ν	SCHMITZ, 1905	Exceptional
Hippolais icterina	Icterine Warbler	N	Ν	FOLMER & ORTVAD, 1992	Exceptional*
LOCUSTELLIDAE					
Locustella naevia	Common Grasshopper Warbler	N	Ν	CÂMARA & TEIXEIRA, 1980	Only 1 record*
CISTICOLIDAE					
Cisticola juncidis	Zitting Cisticola	N	Ν	SCHMITZ, 1909	Dubious record
SYLVIIDAE					
Sylvia atricapilla heineken	Eurasian Blackcap	Y	Y	HARCOURT, 1851	Very common
Sylvia borin	Garden Warbler	N	Ν	SCHMITZ, 1897a	Exceptional
Sylvia curruca	Lesser Whitethroat	N	Ν	SCHMITZ, 1908b	Exceptional
Sylvia hortensis	Western Orphean Warbler	N	Ν	SCHMITZ, 1897a	Exceptional
Sylvia communis	Common Whitethroat	N	Ν	SCHMITZ, 1897a	Exceptional
Sylvia conspicillata orbitalis	Spectacled Warbler	Y	Y	HARCOURT, 1851	Rare
Sylvia cantillans	Subalpine Warbler	N	Ν	HUNTER et al., 1986	Exceptional
Sylvia melanocephala	Sardinian Warbler	N	Ν	OGILVIE-GRANT, 1890	Exceptional
REGULIDAE					
Regulus madeirensis	Madeira Firecrest	Y	Y	HARCOURT, 1851	Common
TROGLODYTIDAE					
Troglodytes troglodytes	Eurasian Wren	N	Ν	HARCOURT, 1851	Exceptional
STURNIDAE					
Acridotheres tristis	Common Myna	N	Ν	FAGUNDES & ROMANO, 2005	Only 1 record
Pastor roseus	Rosy Starling	N	Ν	SCHMITZ, 1908b	Exceptional
Sturnus vulgaris	Common Starling	Y	Ν	HARCOURT, 1851	Seasonal
Sturnus unicolor	Spotless Starling	N	Ν	JENSEN, 1981	Only 1 record
Lamprotornis chalybaeus	Greater Blue-eared Starling	N	Ν	ZINO et al., 1995 (as L.purpureus)	Exceptional
TURDIDAE					
Hylocichla mustelina	Wood Thrush	N	Ν	ZINO et al., 1995	Only 1 record
Turdus torquatus alpestris	Ring Ouzel	Y	Ν	ZINO et al., 1995	Only 1 record
Turdus merula cabrerae	Common Blackbird	Y	Y	SLOANE, 1707	Very common
Turdus ruficollis	Red-throated Thrush	N	Ν	SCHMITZ, 1903	Only 1 record
Turdus pilaris	Fieldfare	Y	Ν	SCHMITZ, 1896a	Occasional

Scientific name	English name	Specimen in MMF	Breeder	Original reference	Frequency or abundance
Turdus iliacus	Redwing	Y	Ν	HARCOURT, 1851	Occasional
Turdus philomelos	Song Thrush	Y	Ν	HARCOURT, 1851	Exceptional
Turdus viscivorus	Mistle Thrush	N	?	BOURNE, 1984	Very rare
MUSCICAPIDAE					
Erithacus rubecula rubecula	European Robin	Y	Y	HARCOURT, 1851	Common
Luscinia megarhynchos	Common Nightingale	N	Ν	SCHMITZ, 1899	Exceptional
Erythropygia galactotes	Rufous-tailed Scrub Robin	Y	Ν	BANNERMAN & BANNERMAN, 1965	Exceptional
Phoenicurus ochruros	Black Redstart	Y	Ν	SCHMITZ, 1903	Occasional
Phoenicurus phoenicurus	Common Redstart	Y	Ν	OGILVIE-GRANT, 1890	Occasional
Saxicola rubetra	Whinchat	N	Ν	SCHMITZ, 1909	Occasional
Saxicola torquatus	African Stonechat	Y	Ν	SARMENTO, 1936	Occasional
Oenanthe isabellina	Isabelline Wheatear	N	Ν	BOURNE, 1984	Only 1 record
Oenanthe oenanthe oenanthe	Northern Wheatear	Y	Ν	SCHMITZ, 1899	Seasonal
Oenanthe oenanthe leucorhoa	Greenland Wheatear	Y	Ν	BANNERMAN & BANNERMAN, 1965	Seasonal
Oenanthe deserti	Desert Wheatear	Y	Ν	TSCHUSI, 1901	Exceptional
Monticola saxatilis	Rufous-tailed Rock Thrush	N	Ν	MOUGIN et al., 1987	Only 1 record
Monticola solitarius	Blue Rock Thrush	N	Ν	POESCH, 1961	Dubious record
Muscicapa striata	Spotted Flycatcher	N	Ν	SCHMITZ, 1897a	Occasional
Ficedula hypoleuca	European Pied Flycatcher	Y	Ν	SARMENTO, 1936	Occasional
Ficedula parva	Red-breasted Flycatcher	N	Ν	ZINO et al., 1995	Only 1 record
PASSERIDAE					
Passer domesticus	House Sparrow	Y	Ν	HARCOURT, 1851	Exceptional
Passer hispaniolensis	Spanish Sparrow	Y	Y	OGILVIE-GRANT, 1890	Rare
Petronia petronia petronia	Rock Sparrow	Y	Y	HARCOURT, 1851	Rare
PLOCEIDAE					
Euplectes afer	Yellow-crowned Bishop	N	Ν	HEIDE, 2008	Only 1 record
Euplectes hordeaceus	Black-winged Red Bishop	N	Ν	SCHMITZ, 1900	Dubious record
ESTRILDIDAE					
Estrilda astrild	Common Waxbill	N	Y	CÂMARA, 1997	Rare
PRUNELLIDAE					
Prunella modularis	Dunnock	N	Ν	CHARLES & QUINTAL, 2006	Only 1 record
MOTACILLIDAE					
Motacilla flava flava	Western Yellow Wagtail	N	Ν	NORONHA & SCHMITZ, 1902	Occasional
Motacilla flava iberiae	Iberian Yellow Wagtail	N	Ν	FAGUNDES & ROMANO, 2008d	Occasional

Scientific name	English name	Specimen in MMF	Breeder	Original reference	Frequency or abundance
Motacilla flava cinereocapilla	Ashy-headed Wagtail	N	Ν	FAGUNDES & ROMANO, 2009e	Occasional
Motacilla flava thunbergi	Dark-headed Wagtail	N	Ν	FAGUNDES & ROMANO, 2008e	Occasional
Motacilla cinerea schmitzi	Madeiran Grey Wagtail	Y	Y	HARCOURT, 1851	Common
Motacilla alba alba	White Wagtail	Y	Ν	HARCOURT, 1851	Seasonal
Motacilla alba yarrellii	Pied Wagtail	Y	Ν	FAGUNDES & ROMANO, 2009d	Seasonal
Anthus campestris	Tawny Pipit	N	Ν	SWASH, 1986	Exceptional
Anthus pratensis	Meadow Pipit	Y	Ν	SCHMITZ, 1897a	Exceptional
Anthus trivialis	Tree Pipit	N	Ν	SCHMITZ, 1905	Exceptional
Anthus cervinus	Red-throated Pipit	N	Ν	ZINO et al., 1995	Only 1 record
Anthus berthelotii berthelotii	Berthelot's Pipit	Y	Y	OGILVIE-GRANT, 1896	Common*
Anthus berthelotii madeirensis	Madeiran Berthelot's Pipit	Y	Y	HARCOURT, 1851	Common
FRINGILLIDAE					
Fringilla coelebs maderensis	Madeiran Chaffinch	Y	Y	HARCOURT, 1851	Very common
Fringilla montifringilla	Brambling	N	Ν	SCHMITZ, 1897a	Exceptional
Serinus serinus	European Serin	N	Ν	JENSEN, 1981	Only 1 record
Serinus canaria	Atlantic Canary	Y	Y	SLOANE, 1707	Very common
Carduelis chloris	European Greenfinch	Y	Y	ZINO, 1969	Rare
Carduelis spinus	Eurasian Siskin	N	Y	JENSEN, 1981	Rare
Carduelis carduelis parva	European Goldfinch	Y	Y	HARCOURT, 1851	Common
Carduelis cannabina guentheri	Common Linnet	Y	Y	HARCOURT, 1851	Rare
Loxia pytyopsittacus	Parrot Crossbill	N	Ν	SILVEIRA & SCHMITZ, 1910	Only 1 record
Loxia curvirostra	Red Crossbill	Y	Ν	BANNERMAN & BANNERMAN, 1965	Exceptional
Coccothraustes coccothraustes	Hawfinch	Y	Ν	SCHMITZ, 1908a	Exceptional
PARULIDAE					
Dendroica petechia	Mangrove Warbler	N	Ν	DEFOS DU RAU et al., 1994	Only 1 record*
Setophaga ruticilla	American Redstart	N	Ν	ZINO et al., 1995	Only 1 record*
EMBERIZIDAE					
Emberiza schoeniclus	Common Reed Bunting	N	Ν	FAGUNDES & ROMANO, 2010c	Only 1 record
CALCARIIDAE					
Plectrophenax nivalis	Snow Bunting	Y	Ν	SCHMITZ, 1907	Occasional

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