

CONTRIBUTION TO THE LIST OF BIRDS OF THE ISLAND OF ŠOLTA

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This paper presents data on 26 species and two subspecies, which are new in relation to the already existing list of the birds of the Šolta Island published two decades ago, and which add up to the knowledge of its ornithofauna to an overall number of 132 species. New data were gathered from various sources: 7 species were recorded during the authors' own field research on the island, 3 species concern the recovery of ringed birds, 12 species were found in the private collections of J. Purtić and the Vlak family, 2 new species in the catalogue of the ornithological collection of the Natural History Museum in Split, 1 new species from the catalogue of the Bird Collection of the Croatian Natural History Museum in Zagreb and 1 in the older ornithological literature. From the total of 26 species new to Šolta Island, 3 are breeding birds, and 23 are migrant or winter visitors birds of the island.

Key words: ornithofauna, bird collection, bird skin, Adriatic island, Croatia

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U ovom radu prikazano je 26 vrsta (i dvije podvrste) koje su nove u odnosu na dosadašnji popis ptica za otok Šoltu objavljen prije dva desetljeća, a koje dopunjuju saznanja o ornitofauni ovoga otoka na ukupno 132 vrste. Novi podaci dobiveni su iz različitih izvora: 7 vrsta na temelju vlastitih terenskih istraživanja, 3 vrste obradom podataka prstenovanih ptica, 12 vrsta na temelju privatnih zbirki J. Purtića i obitelji Vlak, 2 vrste iz kataloga Ornitološke zbirke Prirodoslovnog muzeja u Splitu, 1 vrsta iz kataloga Zbirke ptica Hrvatskog prirodoslovnog muzeja te 1 vrsta iz starije ornitološke literature. Od ukupno 26 vrsta 3 su gnjezdarice, a 23 su proljetno-jesenske selice ili zimovalice otoka Šolte.

Ključne riječi: ornitofauna, zbirka ptica, svlak, jadranski otok, Hrvatska.

INTRODUCTION

Lists of birds usually represent the basis for the subsequent, more detailed and elaborated scientific research. Currently, bird lists in Croatian ornithology are most frequently used in making of ecological studies, although published papers con-

taining bird lists are rather rare. The first list of the birds of Croatia was made in 1811 by entomologist GERMAR who listed 44 bird species for the Adriatic coast, between Rijeka and Dubrovnik, and several other species of the genera *Mergus*, *Colymbus* and *Podiceps* (GERMAR, 1817).

The first list of the avifauna of Šolta Island had been compiled by SUŠIĆ *et al.* (1990), who claimed 105 species for the area, but presented data make up for a total of 106 species (MUŽINIĆ & PURGER, 2009, 2010). In the time of compiling of this list, bird ringing had been conducted on the island (SUŠIĆ *et al.*, 1990; MUŽINIĆ & PURGER, 2010). Since then, several catalogues of ornithological collections containing skeletons and bird skins, originating from Šolta Island have been published (PIASEVOLI & PALLAORO, 1991; KRALJ & TUTIŠ, 1996; GRBAC & KRALJ, 2008; MUŽINIĆ & PURGER, 2010). In addition, some current observations of birds species new for the island have been published (MUŽINIĆ, 2008; MUŽINIĆ & PURGER, 2007, 2008; PURGER & MUŽINIĆ, 2007, 2008). Together these new informations made a substantial contribution to the knowledge of the island's avifauna. Consequently, in this paper we present an update and revision of SUŠIĆ *et al.* (1990) original list by including all data published since the early 1990s as well as hitherto unpublished results of field work on the island.

STUDY AREA

The island of Šolta is a mid-sized island with a surface of 57.886 km², and belongs to the middle Dalmatian archipelago (PRCIĆ, 1990). Šolta has no surface waters, apart from some smaller puddles which constitute gathering sites for birds. The island is hilly, with the highest point Vela straža (237 m a.s.l.) in the eastern part of the island. Degraded stages of *Orno-Quercetum ilicis* forest, maquis (macchia) and garigues (garrigue), rocky pastures and dry grasslands dominate on Šolta (BEDALOV & FISCHER, 1990). In several places aleppo pine (*Pinus halepensis*) forests appear on the island. Agriculturally used land exists in the inner part of the western part of Šolta, where an app. 6 km long, and 2.5 km wide area has been cultivated with vineyards and vegetables. Recently some agricultural land has been abandoned.

MATERIAL AND METHODS

Field research into the ornithofauna of Šolta Island has been conducted by both authors between October 24–27, 2007; May 20–30, 2008; September 24–28, 2008; and September 16–20, 2009 (MUŽINIĆ, 2008; MUŽINIĆ & PURGER, 2007, 2008; PURGER & MUŽINIĆ, 2007, 2008) on the whole area of the island. Research into the island's bird fauna included the analysis of data from bird-ringing on Šolta, which has been conducted by Armin Pallaoro between 1985 and 1991 (MUŽINIĆ & PURGER, 2009). Two private ornithological collections from the island have been catalogued: the collection of Josip Purčić from Srednje Selo, and the collection of the Vlak family from Rogač (MUŽINIĆ & PURGER, 2010). Catalogues of collections in natural history museums which contain birds from Šolta (PIASEVOLI & PALLAORO, 1991; KRALJ & TUTIŠ,

1996; GRBAC & KRALJ, 2008) have been examined (MUŽINIĆ & PURGER, 2010). In addition, our research included the review of literature which was not considered by SUŠIĆ *et al.* (1990). The bird species were listed according to the systematical order used by LUKAČ (2007), and English names were given according to GILL & WRIGHT (2006). The status of bird species in regard to the time of observation, collecting or ringing, is given according to KRALJ (2005) and LUKAČ (2007).

RESULTS AND DISCUSSION

The list of new bird species which are hitherto unknown from the island of Šolta includes 26 species and two subspecies of previously not recorded species. All newly recorded species as well as the subspecies of Eastern Black-eared Wheather *Oenanthe hispanica melanoleuca*, and Smaller Eastern Olivaceous Warbler *Hippolais pallida elaeica* are discussed here.

CICONIIFORMES

Ciconiidae

1. *Ciconia ciconia* (Linnaeus, 1758) – White Stork

Around 1970 a wounded white stork with a ring was recorded in Grohote. Neither the ring nor the data of the ring have been preserved. The bird was transferred to the Zoological garden in Split, but its further whereabouts remain unknown (Dinko Sule, pers. comm.).

ANSERIFORMES

Anatidae

2. *Anser albifrons* (Scopoli, 1769) – Greater White-fronted Goose

A bird skin of the species is part of the collection of the Vlak family (MUŽINIĆ & PURGER, 2010). Date of its acquisition is unknown. The bird was most likely shot during migration or winter.

3. *Anas platyrhynchos* Linnaeus, 1758 – Mallard

A bird skin of the species in the Natural History Museum in Split is reported by PIASEVOLI & PALLAORO (1991). It was collected on February 5, 1956. A female with three young birds was recorded on September 17, 2009 by Vladimir Vlak (pers. comm.) and confirms the nesting of the species on Šolta.

FALCONIFORMES

Accipitridae

4. *Circus cyaneus* (Linnaeus, 1766) – Northern Harrier

Two sources confirm the presence of the species: one specimen, collected on February 16, 1956 is in the Natural History Museum in Split (PIASEVOLI & PALLAORO,

1991), one female is in the collection of the Vlak family (MUŽINIĆ & PURGER, 2010). Dates for both acquisitions are unknown, but the birds were most likely shot during migration or winter.

GRUIFORMES

Gruidae

5. *Grus grus* (Linnaeus, 1758) – Common Crane

The skin of an individual is in the collection of the Vlak family (MUŽINIĆ & PURGER, 2010). The date of acquisition is unknown, but we presume that the bird was shot during migration.

CHARADRIIFORMES

Recurvirostridae

6. *Himantopus himantopus* (Linnaeus, 1758) – Black-winged Stilt

A bird skin is part of the collection of the Vlak family (MUŽINIĆ & PURGER, 2010). Collection date is unknown. The bird has been most likely killed during migration.

Charadriidae

7. *Vanellus vanellus* (Linnaeus, 1758) – Northern Lapwing

According to CSÖRGEY (1903), on February 25, 1902 a flock of 50 lapwings was flying from the direction of Šolta towards Split. A more current data refers to the end of February, 2009 when Maja Vlak (pers. comm.) saw three lapwings in Šoltansko polje near water. Most likely the birds were on migration.

Scolopacidae

8. *Calidris minuta* (Leisler, 1812) – Little Stint

During bird ringing in Srednje Selo, on May 11, 1990 one specimen was recorded (MUŽINIĆ & PURGER, 2009), which points to spring migration over Šolta.

9. *Calidris alpina* (Linnaeus, 1758) – Dunlin

One bird skin is part of the collection of J. Purčić (MUŽINIĆ & PURGER, 2010). Most likely the bird was killed during migration or wintering.

10. *Gallinago gallinago* (Linnaeus, 1758) – Common Snipe

A bird skin is part of the collection of J. Purčić (MUŽINIĆ & PURGER, 2010), which most likely was acquired during migration or wintering.

11. *Gallinago media* (Latham, 1787) – Great Snipe

A bird skin is part of the collection of J. Purčić (MUŽINIĆ & PURGER 2010). The bird was most likely shot during migration.

12. *Tringa ochropus* Linnaeus, 1758 – Green Sandpiper

One specimen was recorded during ringing in Srednje Selo, on April 23, 1989 (MUŽINIĆ & PURGER, 2009). The bird was caught during migration.

COLUMBIFORMES

Columbidae

13. *Columba palumbus* Linnaeus, 1758 – Common Wood Pigeon

A flock of 5 birds was recorded in Nečujam on October 24, 2007 (Mužinić J. and Purger J. J. unpublished data). The birds were most likely migrating or wintering.

STRIGIFORMES

Strigidae

14. *Strix aluco* Linnaeus, 1758 – Tawny Owl

Skin of the species is part of the collection of the Vlak family (MUŽINIĆ & PURGER, 2010). Tawny Owl is most probably a resident breeding bird.

15. *Asio otus* (Linnaeus, 1758) – Long-eared Owl

Skin is part of the collection of the Vlak family, and another specimen is in the collection of J. Purtić (MUŽINIĆ & PURGER, 2010). This species is probably winter visitor on the island.

CORACIIFORMES

Coraciidae

16. *Coracias garrulus* Linnaeus, 1758 – European Roller

M. Andrić recorded a specimen of the species on Šolta in spring of 2007, during the making of a film about natural history for the Croatian Television (MUŽINIĆ, 2008). The bird was most probably seen during spring migration.

PICIFORMES

Picidae

17. *Jynx torquilla* Linnaeus, 1758 – Eurasian Wryneck

A skin of the species is part of the collection of J. Purtić (MUŽINIĆ & PURGER, 2010). The bird was most likely caught during migration.

18. *Picus viridis* Linnaeus, 1758 – European Green Woodpecker

A skin of green woodpecker is part of the collection of J. Purtić (MUŽINIĆ & PURGER, 2010). Most likely the bird was collected as a vagrant to Šolta Island during migration.

19. *Picoides major* (Linnaeus, 1758) – Great Spotted Woodpecker

Two sources point to the presence of the species: CVITANIĆ (1963) recorded the species in Gornje Selo on October 27, 1956, and the collection of J. Purtić contains the skin of a female, and a juvenile bird (MUŽINIĆ & PURGER, 2010). Most likely Great Spotted Woodpecker is a resident breeding bird on Šolta Island.

PASSERIFORMES

Motacillidae

20. *Anthus trivialis* (Linnaeus, 1758) – Tree Pipit

One adult specimen was recorded during ringing in Grohote on September 15, 1989 (MUŽINIĆ & PURGER, 2009). The bird was presumably recorded during autumn migration.

21. *Motacilla feldegg* Michahelles, 1830 – Black-headed Wagtail

A male Black-headed Wagtail *Motacilla flava feldegg* was collected on April 11, 1900 on the Šolta Island, and included into the collection of the Croatian National History Museum (GRBAC & KRALJ, 2008). Currently the former subspecies was separated from *M. flava* and has required the species status; this subspecies is considered *M. feldegg* species. The Šolta specimen was most likely collected during migration.

Turdidae

–. *Oenanthe hispanica* Linnaeus, 1758 – Black-eared Wheather

The species was included by SUŠIĆ *et al.* (1990) into their list of the birds of Šolta Island.

Oenanthe hispanica melanoleuca (Güldenstädt, 1775) – Eastern Black-eared Wheather

One specimen was collected in 1887 on Šolta Island, and is kept as a skeleton in the Ornithological Collection of the Natural History Museum in Vienna (KRALJ & TUTIŠ, 1996). An adult male, collected on April 6, 1899 in Maslinica on Šolta Island, and another adult male, collected on June 7, 1900 on Šolta, are both deposited in the Croatian Natural History Museum (GRBAC & KRALJ, 2008).

22. *Turdus pilaris* Linnaeus, 1758 – Fieldfare

A skin of the species is in the collection of J. Purčić (MUŽINIĆ & PURGER, 2010). The bird was most likely migrating or wintering.

Sylviidae

–. *Hippolais pallida* (Hemprich & Ehrenberg, 1833) – Eastern Olivaceous Warbler

The species was included into the bird list of Šolta Island by SUŠIĆ *et al.* (1990).

Hippolais pallida elaeica (Lindermayer, 1843) – Smaller Eastern Olivaceous Warbler

One adult male belonging to this subspecies was collected on July 31, 1899 in Maslinica. The bird skin is in the collection of the Croatian Natural History Museum (GRBAC & KRALJ, 2008).

Paridae

23. *Parus caeruleus* Linnaeus, 1758 – Blue Tit

Blue Tits were observed only once: 3 specimens were recorded on October 26, 2007 southeast of Stomorska in Gornja Krušica on olive trees (*Olea europea*) in the hinterlands of the bay area. In May and September, 2008, and in September, 2009 we again spent several days on the island, but did not manage to see Blue Tits (Mužinić J. and Purger J. J. unpubl. data). Thus the species is probably only a rare winter visitor on the island.

Sturnididae

24. *Sturnus roseus* (Linnaeus, 1758) – Rosy Starling

Two specimens of Rosy Starling were recorded in Donje Selo on May 21, 2008 (PURGER & MUŽINIĆ, 2008). Presumably the birds were on spring migration.

Ploceidae

25. *Passer hispaniolensis* (Temminck, 1820) – Spanish Sparrow

One bird was recorded in Donje Selo on October 24, 2007 (MUŽINIĆ & PURGER, 2007). It was most likely recorded during migration, with the possibility of wintering.

Fringillidae

26. *Fringilla montifringilla* Linnaeus, 1758 – Brambling

A skin is a part of the collection of J. Purtić (MUŽINIĆ & PURGER, 2010). The bird was most probably collected during winter on the island.

CONCLUSION

In conclusion, from the above listed species new for the area, 3 species are presumed or confirmed breeding birds (*A. platyrhynchos*, *S. aluco* and *P. major*), while 23 species are spring/autumn migrants or winter visitors to Šolta Island. Of the latter, *C. ciconia* and *P. viridis* may be rare vagrants from the continent. By adding 26 species the overall list of birds for the island of Šolta now includes 132 species.

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S A Ž E T A K

Dopuna popisa ptica otoka Šolte

J. Mužinić & J. J. Purger

Ornitološka istraživanja u razdoblju od 2007. do 2009. godine provedena su na cijelom području otoka Šolte. Istražene su dvije privatne ornitološke zbirke, obrađena je literatura koja je obuhvatila ornitološke radove i objavljene kataloge muzejskih zbirki, a također su obrađeni podaci o prstenovanju ptica na otoku. Na temelju ovih izvora prvi popis ptica otoka Šolte kojim je prije dva desetljeća prikazano 106 vrsta dopunjen je s 26 novih vrsta: *Ciconia ciconia*, *Anser albifrons*, *Anas platyrhynchos*, *Circus cyaneus*, *Grus grus*, *Himantopus himantopus*, *Vanellus vanellus*, *Calidris minuta*, *C. alpina*, *Gallinago gallinago*, *G. media*, *Tringa ochropus*, *Columba palumbus*, *Strix aluco*, *Asio otus*, *Coracias garrulus*, *Jynx torquilla*, *Picus viridis*, *Picoides major*, *Anthus trivialis*, *Motacilla feldegg*, *Turdus pilaris*, *Cyanistes coeruleus*, *Pastor roseus*, *Passer hispaniolensis*, *Fringilla montifringilla*. Od toga je 7 vrsta ustanovljeno na temelju vlastitih terenskih istraživanja, 3 su vrste dokazane obradom podataka prstenovanih ptica, 12 vrsta na temelju privatnih zbirki J. Purtića i obitelji Vlak, 2 vrste iz kataloga Ornitološke zbirke Prirodoslovnog muzeja u Splitu, 1 vrsta iz kataloga Zbirke ptica Hrvatskog prirodoslovnog muzeja te 1 vrsta iz starije ornitološke literature. Od ukupno 26 vrsta tri su gnjezdarice, a 23 su proljetno-jesenske selice odnosno zimovalice otoka Šolte. Nakon ovih dopuna ornitofaunu otoka Šolte čine 132 vrste ptica.