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# Dutch Birding



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Voor taxonomie, volgorde en naamgeving van vogels in Dutch Birding worden de volgende overzichten aangehouden: *Dutch Birding-vogelnamen* door A B van den Berg (2008, Amsterdam; online update 2020, [www.dutchavifauna.nl/wpvogelnamen](http://www.dutchavifauna.nl/wpvogelnamen)) (taxonomie en wetenschappelijke, Nederlandse en Engelse namen van West-Palearctische vogels); en *IOC world bird list 10.1* door F Gill, D Donsker & P Rasmussen (2020, [www.worldbirdnames.org](http://www.worldbirdnames.org)) (taxonomie en wetenschappelijke, Engelse en Nederlandse namen van overige vogels in de wereld; Nederlandse namen door P Verduijnsje en A J van Loon).

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# Audubon's Shearwater collected in Skagerrak, Denmark, in September 1912

Robert L Flood, Kent Olsen, Tereza Senfeld, Thomas J Shannon & J Martin Collinson

The Natural History Museum of Denmark in København (Copenhagen) houses a specimen of *Puffinus* shearwater labelled Barolo Shearwater *P baroli*, collected in Skagerrak on 18 September 1912. We re-identified this specimen as Audubon's Shearwater *P lherminieri* based upon DNA analysis, measurements and assessment of plumage, and we traced the history of the specimen. It represents the first and only record to date of Audubon's in the Western Palearctic. In this paper we present all documentation of this interesting discovery.

Research into the variation and identification of the small black-and-white Barolo Shearwater and Boyd's Shearwater *P boydi* (Flood & van der Vliet 2019) included contact with all museums that held specimens of these shearwaters. A visit to each museum was arranged where possible, otherwise the museum's bird curator was requested to send photographs of the specimen(s). One such case involved the Natural History Museum of Denmark skin labelled '*P assimilis baroli*, Skagerrak, 18.9.1912, adult female' (today, the stretch of water called Skagerak is spelt Skagerrak). The collection manager Jan Bolding Kristensen sent Robert Flood photographs and a note about the specimen published in Danish (Hørring 1942), which concluded that the specimen was a Barolo, not a Manx Shearwater *P puffinus* as stated on the original label (using the old scientific name *P anglorum*; Helms 1914, Hørring 1925, Scheel 1925, Curry Lindahl 1963).

Based on a visual assessment of structural features in the photographs, RF doubted that the specimen was Barolo Shearwater or Manx Shearwater. He loaned the skin through the Natural History Museum at Tring, England. His measurements of the skin, using calipers, largely agreed with Hørring (1942) and fell outside of the range of Barolo (measurements too large) and Manx (measurements too small). The specimen appeared to have a relatively long tail, although the tail-feathers are damaged, making accurate measurement difficult. RF examined the plumage and found

consistency with the plumage of Boyd's Shearwater and Audubon's Shearwater; however, the wings were fixed tight to the body and it was not possible to fully examine the underwings without causing damage to the specimen. Small black-and-white *Puffinus* shearwaters that inhabit the Indian Ocean and Pacific Ocean could therefore not be safely eliminated. Martin Collinson agreed to undertake a DNA analysis of the specimen and JBK agreed to destructive sampling of the specimen (toepad sample). DNA analysis determined that the specimen is an Audubon's and the biometrics and plumage are consistent with this identification.

## DNA analysis

A toepad sample was taken from the skin for DNA analysis (see appendix). Using NCBI Nucleotide BLAST, the sequence from the Skagerrak shearwater was compared with previously sequenced shearwaters. This confirmed its identity as Audubon's Shearwater. Its COI sequence was a 100% match for multiple Audubon's sequences and no more than 1 bp different from any Audubon's sequence in GenBank. By comparison, it was 3 bp different from the closest matching Boyd's Shearwater sequences, 4-5 bp different from the closest matching Manx, Little *P assimilis haurakiensis*, Bannerman's *P bannermani* and Barolo Shearwater, and more divergent still from all other shearwater taxa. The result is summarised in figure 1. The identity of the Skagerrak shearwater was not traced to subspecies.

## Measurements

Measurements of the wing and bill of the Skagerrak shearwater (Hørring 1942; RF) fall in the central region of the ranges for Audubon's Shearwater (table 1; sources cited in caption). Measurement of the Skagerrak shearwater's wing (192-195 mm, Hørring 1942; 193-195 mm, RF) falls outside the ranges for Barolo Shearwater and Boyd's Shearwater, except for the extreme of one of two ranges for Barolo in Flood & van der Vliet (2019; 170-192 mm) and the extreme of the range for



FIGURE 1 Phylogram based on partial COI showing relationship of Skagerrak shearwater (indicated with red diamond) and all *Puffinus* taxa for which sequence data are available in GenBank. Skagerrak shearwater was identical to multiple Audubon's Shearwater *P. Iherminieri* and divergent from all other shearwater taxa.

**206-207** Specimens of (from left to right) Barolo Shearwater / Kleine Pijlstormvogel *Puffinus baroli*, female (collected by William R Ogilvie-Grant at Selvagem Grande, Selvagens, on 24 April 1895; Natural History Museum, Tring, England); Boyd's Shearwater / Kaapverdise Kleine Pijlstormvogel *P. boydi*, female (collected by Boyd Alexander at Rombos Islands, Cape Verde Islands, in March 1897; Natural History Museum, Tring, England); Audubon's Shearwater / Audubons Pijlstormvogel *P. Iherminieri*, adult female (collected at Skagerrak, Denmark, on 18 September 1912; Natural History Museum of Denmark, København); and Manx Shearwater / Noordse Pijlstormvogel *P. puffinus*, female (collected by G M Mathews on Skokholm, Pembrokeshire, Wales, on 20 July 1931; Natural History Museum, Tring, England), Natural History Museum, Tring, England, 4 April 2019 (Robert L Flood). Skagerrak Audubon's is clearly smaller than Manx and perceptibly longer than Barolo and Boyd's (excluding bill). Upperside colouration of all four is similar. Underside plumage aspect is similar but note large dark thigh patches of Skagerrak specimen. As here, undertail-coverts often obscured by feet in museum specimens (see plate 209).



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See caption on facing page

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*Audubon's Shearwater collected in Skagerrak, Denmark, in September 1912*

TABLE 1 Comparison of wing, tail and bill measurements (mm) of Barolo Shearwater *Puffinus baroli*, Boyd's Shearwater *P boydi*, Audubon's Shearwater *P lherminieri* and Skagerrak Audubon's. Data are: mean±1SD, range (sample size) (or only sample size). Sexes combined unless shown otherwise. <sup>1</sup>Olson (2010), <sup>2</sup>Howell (2012), <sup>3</sup>BWPi (2006), <sup>4</sup>Silva & Olmos (2010), <sup>5</sup>Flood & van der Vliet (2019). Additional bill measurements of Skagerrak Audubon's: length of maxillary unguis 12 mm, nasal tube 8 mm, culminicorn 9 mm, maximum depth of maxillary unguis 5.9 mm, nasal tube 8.2 mm, culminicorn 5.5 mm (RF). Manx Shearwater *P puffinus* is much larger, thus not included here.

Species	Wing	Tail	Bill
Skagerrak <i>P lherminieri</i>	192-195	damaged	29
<i>P baroli</i>	173.9±4.9, 165-183 (n=15) <sup>1</sup> ♂ 184±4.9, 176-190 (n=7) <sup>3</sup> ♀ 179±5.0, 170-185 (n=6) <sup>3</sup> 177.9±5.8 (n=8) <sup>4</sup> 181.3±4.1, 170-192 (n=114) <sup>5</sup> 177.9±6.6, 168.9-189.2 (n=9) <sup>5</sup>	71.3±3.7, 67-79 (n=15) <sup>1</sup> 71.8±3.7, 67-78 (n=14) <sup>3</sup> 75.5±7.8 (n=8) <sup>4</sup>	(24-28, n=18) <sup>2</sup> ♂ 26.1±1.0, 24-28 (n=8) <sup>3</sup> ♀ 25.0±0.6, 24-26 (n=6) <sup>3</sup> 25.7±1.2 (n=8) <sup>4</sup> 25.0±0.8, 23.0-26.6 (n=54) <sup>5</sup>
<i>P boydi</i>	182.2±4.4, 174-188 (n=20) <sup>1</sup> 188±3.9, 180-193 (n=15) <sup>3</sup> 181.6±11.4 (n=12) <sup>4</sup>	76.7±2.0, 73-80 (n=20) <sup>1</sup> 77.6±4.0, 71-84 (n=14) <sup>3</sup> 82.6±7.6 (n=12) <sup>4</sup>	23-28 (n=20) <sup>2</sup> 25.2±1.0, 23-28 (n=14) <sup>3</sup> 25.2±4.7 (n=12) <sup>4</sup> 24.5±0.8, 22.9-27.3 (n=42) <sup>5</sup>
<i>P lherminieri</i>	192-210 (n=20) <sup>2</sup>	83-91 (n=20) <sup>2</sup>	27-32 (n=20) <sup>2</sup>
<i>P loyemilleri</i>	185-195 (n=11) <sup>2</sup>	81-88 (n=11) <sup>2</sup>	27-31 (n=11) <sup>2</sup>

Boyd's in BWPi (2006; 180-193 mm), and just within one standard deviation of data in Silva & Olmos (2010; 181.6 mm ± 11.4 mm, n=12). Measurement of the Skagerrak shearwater's bill (29 mm; Hørring 1942 and RF) falls outside the ranges of measurements for Barolo and Boyd's, except just within one standard deviation of data for Boyd's in Silva & Olmos (2010; 25.2 mm ± 4.7 mm, n=12). The tail is damaged but looks relatively long, conforming with Boyd's and Audubon's. Measurements thus support identification as Audubon's.

### Plumage

**HEAD** Dark cap; whitish gap between cap and gape line. Cap reaching rear of eye. Fairly broad whitish fore supercilium. Freckled/marked posterior lore, broken line markings under eye, moderately marked over ear-coverts.

**UPPERPARTS** Dark feathering on upperside essentially overall blackish-brown. No evidence of 'saddlebags' (ie, extension of white feathers from underside onto rump-feathers). Shortish neck tab forward of shoulder.

**UNDERPARTS** Whitish underbody to vent with large dark thigh patches. Longest lateral undertail-coverts all dark, mid-length ones having dark outer web and some dark markings on inner web, shortest ones having dark outer web only. Undertail-coverts whitish except for largely dark longest ones.

**UNDERWING** Dark markings distally on longest axillaries, underwing otherwise inaccessible.

The considerable amount of dark in the undertail-coverts of the Skagerrak shearwater eliminates Barolo Shearwater. C 20% of Barolo have limited dark markings to the tip of the longest uppertail-coverts, while the rest are unmarked (Flood & van der Vliet 2019). The plumage and plumage variation of Audubon's and Boyd's Shearwater are very similar. C 30% of Audubon's have far more extensive dark markings in the underwing greater secondary coverts than any Boyd's and this may be diagnostic (Flood & Fisher 2020) but the fixed wings of the Skagerrak skin prevented inspection of this feature. Thus, the plumage of the Skagerrak shearwater is consistent with Audubon's but does not eliminate Boyd's (see plate 206-214).



**208** Audubon's Shearwater / Audubons Pijlstormvogel *Puffinus lherminieri*, adult female (collected at Skagerrak, Denmark, on 18 September 1912; Natural History Museum of Denmark, København), Natural History Museum, Tring, England, 4 April 2019 (Robert L Flood). Note dark cap reaching rear of eye, fairly broad whitish fore supercilium, freckled/marked posterior lore, broken line markings under eye, moderately marked over ear-coverts. Head pattern of Audubon's is variable but Skagerrak bird shows common pattern. Note also relatively long bill and that areas which may have been bluish have become mustard coloured. **209** Audubon's Shearwater / Audubons Pijlstormvogel *Puffinus lherminieri*, adult female (collected at Skagerrak, Denmark, on 18 September 1912; Natural History Museum of Denmark, København), Natural History Museum, Tring, England, 4 April 2019 (Robert L Flood). Undertail-coverts are often obscured by feet in museum specimens. Here, feet were carefully lifted and isolated from longest uppertail-coverts, which evidently are all dark, while shorter ones are whitish, which is common pattern in Audubon's. **210** Audubon's Shearwater / Audubons Pijlstormvogel *Puffinus lherminieri*, adult female (collected at Skagerrak, Denmark, on 18 September 1912; Natural History Museum of Denmark, København), Natural History Museum, Tring, England, 4 April 2019 (Robert L Flood). As here, some Audubon's Shearwaters have dark (sub)terminal markings on longest axillaries.



**211** Audubon's Shearwater / Audubons Pijlstormvogel *Puffinus lherminieri*, Hatteras, North Carolina, USA, 25 August 2018 (*Kate Sutherland*) **212** Audubon's Shearwater / Audubons Pijlstormvogel *Puffinus lherminieri*, Hatteras, North Carolina, USA, 28 May 2018 (*Peter Flood*). Head pattern of both birds similar to Skagerrak Audubon's (plate 208). 'Saddlebags' are variable in Audubon's and are absent in Skagerrak shearwater and Audubon's in plate 212. Feet and legs are lowered in plate 211, revealing more extensive dark in undertail-coverts compared with Skagerrak shearwater but this difference is not unusual. Note relatively long tail.



### **Range and vagrancy of Audubon's Shearwater**

In the North Atlantic, *P l herminieri* breeds in the Lesser Antilles and Bahamas archipelagos. Presumably, it was this taxon recently discovered breeding in Cuba (Casariego et al 2007). It colonised Bermuda (Bradlee 1906) after Boyd's Shearwater was extirpated in the 17th century following colonisation by humans and human introduction of invasive predators, although it too was extirpated in the early 1980s (Amos 1991, Trimm 2004, Trimm & Hayes 2005, Olson 2010; David Wingate in litt). *P l loyemilleri* breeds on islets off north-western Panama, northern Venezuela and north-eastern Brazil (Trimm 2004, Trimm & Hayes 2005, Lopes et al 2014), and presumably it is this taxon that breeds at Fernando de Noronha, north-eastern Brazil (Silva & Olmos 2010), in the South Atlantic just south of the Equator.

In the South Atlantic, bone fossils indicate that Audubon's Shearwater was once well-established on St Helena (Olson 1975), and mineral encrusted bone fragments of an individual were found on Ascension (Olson 1977), possibly a member of the original seabird community and extirpated by rats (Weber & Weber 2019). Live individuals examined from Levelwood, St Helena, in February 1976 (slide/photograph at NHM, Tring) and Botswainbird islet, Ascension, in March 1959 (moulting; Stonehouse 1962; slide/photograph at NHM, Tring) may have been vagrants from the North Atlantic, which would be evidence of long-distance vagrancy but could also have been the last remnants of the once previously established population (further sightings of Audubon's in this region would be of great interest to seabird researchers).

### *Previous reports in the WP*

Two Audubon's Shearwaters have been claimed in Britain. John Gould supplied an Audubon's to the Natural History Museum in London, England, 'said to have been killed in Devonshire – Mr Whiteley' but it was not included in his book 'Birds of Britain' and so it has been dismissed (Witherby 1924, Bourne 1992). Also, an Audubon's was apparently found alive on a beach near Hastings, Sussex, England, on 7 January 1936 (Harrison 1936). Audubon's was not included in the British list (British Ornithologists' Union 1971), because for petrels the recommendations of Bourne (1967) were followed and 'Hastings rarities' were excluded (Nicholson & Ferguson-Lees 1962). However, Bourne (1992) suggested that the nominate subspecies of Audubon's could reach Britain (thus potentially north-western Europe) but there have been just a few candidates mentioned

from much effort in shore-based watching and pelagic trips around Britain and Ireland and off north-western Europe (Flood & Fisher 2020). Field identification would be extremely difficult as the slightly smaller Boyd's Shearwater is nearly identical in structure and plumage.

The birds of Israel checklist on the Israeli Birding website ([www.israbirding.com](http://www.israbirding.com); accessed 14 December 2019) mentioned four records (1985, 1989, 1992, 1999) listed as Audubon's Shearwater, apparently using the old taxonomy where many taxa were lumped under that name (eg, as in Harrison 1985). Indeed, the bird on 18-21 June 1992 (Shirihai et al 1995, Shirihai 1999) was first thought to be a new species to science '*P atrodorsalis*' but it and the 15 May 1999 bird have now been accepted as Tropical Shearwater *P bailloni* (Sapir & Israeli Rarities & Distribution Committee 2007, Haas 2012). The two earlier records are listed as Persian Shearwater *P persicus* (Shirihai 1996).

Other regional checklists that we have seen with Audubon's Shearwater (eg, Gibraltar) use a taxonomy that lumps Audubon's, Barolo and Boyd's Shearwater. The taxon involved in the Gibraltar sightings almost certainly was Barolo.

### **Origin of specimen and identification history**

The Skagerrak specimen was first mentioned in Helms (1914) with reference to taxidermist Arner Ludvig Valdemar Manniche, and subsequently by Hørring (1925) and Scheel (1925). The latter made reference to rentier Hans Pedersen's bird skin collection where the specimen was kept. All of these sources identified the specimen as Manx Shearwater.

Helms (1914) states that the specimen had been caught on board a boat in the Kattegat Sea. All later references and the label on the specimen only mention Skagerrak (Hørring 1925, 1935, 1942, Scheel 1925). Indeed, Hørring (1925) and Scheel (1925) both mention that the specimen was shot from a ship in Skagerrak, indicating that Helms (1914) was not only incorrect about the location but also incorrect in stating that the specimen was caught on board a boat. Given that Pedersen was considered a most reliable source of information when it comes to his bird skin collection, both at the time and subsequently, and Hørring (1935, 1942) gave no reason to doubt the origin of the specimen or its general provenance, we conclude that changes to both the locality and collection method result from Pedersen's research into the origin of the specimen.

Following Pedersen's death in February 1935, a



**213** Audubon's Shearwater / Audubons Pijlstormvogel *Puffinus lherminieri*, male (collected by J L Bonhote at Washerwoman Cay, Andros, Bahamas, on 12 May 1902), Natural History Museum, Tring, England, 17 May 2019 (*Robert L Flood*) **214** Audubon's Shearwater / Audubons Pijlstormvogel *Puffinus lherminieri*, female (from collection of G S Miller Jr; collected at Green Key, Bahamas, on 4 April 1889), Natural History Museum, Tring, England, 17 May 2019 (*Robert L Flood*). Plates show extremes of dark in undertail-coverts: in plate 213 fully dark, in plate 214 only longest undertail-coverts are dark as Skagerrak Audubon's.





part of his skin collection was transferred as a willed gift to the Natural History Museum of Denmark (Hørring 1935, 1942). When Richard Hørring on behalf of the museum received the skin collection, he noticed a shearwater identified as Manx Shearwater, labelled 'Skagerak, 18.9.1912', that looked too small for a Manx. Based on measurements in Witherby (1924), he reidentified the specimen as Barolo Shearwater, even though both bill and wing measurements were longer than the ranges given in Witherby (1924). To this he added that Witherby (1924) had only 11 skins at his disposal, a too small sample size, and that the specimen must be a large Barolo (Hørring 1942). Hørring did consider Boyd's Shearwater but eliminated it because the specimen did not have the predominantly black undertail-coverts shown in Witherby (1924). Today, we know that this is a variable feature on both Boyd's and Audubon's Shearwater, where extensively white undertail-coverts do occur (Lee 1988, Howell 2012, Flood & van der Vliet 2019, Flood & Fisher 2020).

Pedersen's catalogue of his bird skin collection (CN 909) revealed only that he bought the shearwater or had it stuffed by taxidermist Manniche (Hørring 1942). When approached by Hørring, Manniche had no recollection of the specimen, which Hørring noted was to be expected since Manx Shearwater was unexceptional to collectors and taxidermists of the time. There is no further information about the origin of the bird. Hørring (1942) concluded that in all likelihood the bird was collected/delivered by a Danish fisherman. This would not be unusual at that time, as many rare birds in Denmark have been brought ashore by Danish fishermen for natural history museums or private bird skin collections, either caught in yarn, on hook line or shot.

The provenance of the Skagerrak shearwater was accepted when identified as Manx Shearwater and when reidentified as Barolo Shearwater, so the shearwater entered onto the Danish list as Barolo. It was removed from the list in 2013 because Skagerrak is a large stretch of water that transcends Denmark, Norway and Sweden, and the location in the original accounts of the shearwater apparently were no more specific than Skagerrak. It was concluded that Danish territory had not been proven (Ortvad et al 2015). In fact, Skagerrak is a strait running between the south-eastern coast of Norway, the western coast of Sweden and the Jylland (Jutland) peninsula of Denmark, connecting the North Sea and Kattegat Sea. It includes parts of today's exclusive economic zone (EEZ, 200 nautical miles zone) of not only Denmark but

also Norway and Sweden. However, our investigation found evidence that the specimen was shot by a Danish fisherman (Hørring 1942). Danish fishing in Skagerrak at the time was predominantly coastal, from small fishing vessels, and it is very unlikely that Danish fishing in the Skagerrak was conducted outside of the current EEZ of Denmark. Based on our thorough literature study and our study of the specimen, the Danish rarities committee has recently included the Skagerrak Audubon's Shearwater in the Danish list of birds (Kent Olsen in litt).

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### Samenvatting

AUDUBONS PIJLSTORMVOGEL VERZAMELD IN SKAGERRAK, DENEMARKE, IN SEPTEMBER 1912 In de collectie van het Natuurhistorisch Museum van Denemarken in København (Kopenhagen) bevindt zich een balg van een pijlstormvogel *Puffinus*, verzameld in het Skagerrak op 18 september 1912, gelabeld als Kleine Pijlstormvogel *P baroli*. Dit exemplaar is nu gherdetermineerd als Audubons Pijlstormvogel *P Iherminieri* gebaseerd op DNA-analyse, maten en bestudering van het verenkleed. Tevens werd de geschiedenis van het exemplaar achterhaald. Het betreft het eerste en tot nu enige geval van Audubons in de WP. In dit artikel wordt alle documentatie van deze interessante ontdekking gepresenteerd.

### References

- Amos, E J R 1991. A guide to the birds of Bermuda. Bermuda.
- Bourne, W R P 1967. Long-distance vagrancy in the petrels. *Ibis* 109: 141-167.
- Bourne, W R P 1992. Debatable British and Irish seabirds. *Birding World* 5: 382-390.
- Bradlee, T E 1906. Audubon's Shearwater and Peale's Petrel breeding in Bermuda. *Auk* 23: 217.
- British Ornithologists' Union 1971. The status of birds in Britain and Ireland. Oxford.
- BWPi 2006. Birds of the Western Palearctic interactive 2.0. Dvd. London.
- Casariego, P R, Isada, A P, Mena, E P, Batista, D R, Barrios, O, Rojas, E R, & Rodríguez, P D 2007. Primer registro de nidificación del Pampero de Audubon *Puffinus Iherminieri* (Aves: Procellariidae) en Cuba. *J Caribb Ornithol* 20: 111-112.

- Curry Lindahl, K 1963. Vara faglar i Norden 4. Stockholm.
- Flood, R L & Fisher, E A 2020. North Atlantic seabirds: shearwaters, Jouanin's & White-chinned Petrels. Scilly.
- Flood, R L & van der Vliet, R 2019. Variation and identification of Barolo Shearwater and Boyd's Shearwater. *Dutch Birding* 41: 215-237.
- Haas, M 2012. Extremely rare birds in the Western Palearctic. Barcelona.
- Harrison, J M 1936. Audubon's Little Shearwater: a new British bird. *Br Birds* 30: 48-49.
- Harrison, P 1985. Seabirds: an identification guide. Second edition. London.
- Hebert, P N, Stoeckle, M Y, Zemlak, T S & Francis, C M 2004. Identification of birds through DNA barcodes. *PLOS Biol* 2: e312.
- Helms, O 1914. Nye meddelelser om danske fugle. *Dansk Ornitolog Foren Tidsskr* 8: 195-232.
- Hørring, R 1925. Fuglene ved de danske fyr i 1923. *Vidensk Meddel Naturhist Foren* 80: 453-514.
- Hørring, R 1935. Fuglene ved de danske fyr i 1933. *Vidensk Meddel Naturhist Foren* 98: 261-309.
- Hørring, R 1942. Om 6 for Danmarks Fauna nye Fuglearter. *Dansk Ornitolog Foren Tidsskr* 36: 40-54.
- Howell, S N G 2012. Petrels, albatrosses, and storm-petrels of North America: a photographic guide. Princeton.
- Lee, D S 1988. The Little Shearwater (*Puffinus assimilis*) in the western North Atlantic. *Am Birds* 42: 213-220.
- Lopes, A C P A, Vital, M V C & Efe, M A 2014. Potential geographic distribution and conservation of Audubon's Shearwater, *Puffinus Iherminieri* in Brazil. *Pap Avulsos Zool* 54: 293-298.
- Nicholson, E M & Ferguson-Lees, I J 1962. The Hastings rarities. *Br Birds* 55: 299-384.
- Olson, S L 1975. Paleornithology of St Helena Is. *South Atlantic Ocean. Smithsonian Contrib Paleobiol* 23: 1-49.
- Olson, S L 1977. Additional notes on subfossil bird remains from Ascension Island. *Ibis* 119: 37-43.
- Olson, S L 2010. Stasis and turnover in small shearwaters on Bermuda over the last 400,000 years (*Aves*: Procellariidae: *Puffinus Iherminieri* group). *Biol J Linn Soc* 99: 699-707.
- Ortvad, T E, Christensen, J H, Hansen, T H, Kristensen, A B, Olsen, K, Pedersen, K, Rasmussen, P A F & Schwalbe, M 2015. Revision af den danske fugleliste pr. 2013. *Dansk Ornitolog Foren Tidsskr* 109: 24-35.
- Sapir, N & Israeli Rarities and Distribution Committee 2007. Bulletin 6:01 on rare birds in Israel. Website: [www.israbirding.com/irdc/bulletins/bulletin\\_6](http://www.israbirding.com/irdc/bulletins/bulletin_6).
- Scheel, H 1925. En undersøgelse af nogle danske fuglesamlinger. *Dansk Ornitolog Foren Tidsskr* 19: 19-31.
- Shirihai, H 1996. The birds of Israel. London.
- Shirihai, H 1999. Fifty species new to Israel, 1997-1998; their discovery and documentation, with tips on identification. *Sandgrouse* 21: 45-105.
- Shirihai, H, Sinclair, I & Colston, P 1995. A new species of *Puffinus* shearwater from the western Indian Ocean. *Bull Br Ornithol Club* 115: 75-87.
- Silva, S & Olmos, F 2010. Notes on the biology and morphology of Audubon's Shearwaters *Puffinus Iherminieri* (Procellariiformes: Procellariidae) from Fernando de Noronha, northeast Brazil. *Rev Bras Ornitolog* 18: 139-145.
- Stonehouse, B 1962. Ascension Island and the British Ornithologists' Union Centenary Expedition 1957-59. *Ibis* 103b: 108-123.
- Trimm, N A 2004. Behavioral ecology of Audubon's Shearwaters at San Salvador, Bahamas. PhD thesis, Loma Linda University.
- Trimm, N A & Hayes, W K 2005. Distribution of nesting Audubon's Shearwaters (*Puffinus Iherminieri*) on San Salvador Island, Bahamas. In: Buckner, S D & McGrath, T A (editors), Proceedings of the 10th Symposium on the Natural History of the Bahamas, San Salvador, p 138-146.
- Weber, N & Weber, S 2019. Important bird areas: Ascension Island. *Br Birds* 112: 661-682.
- Witherby, H F (editor) 1924. A practical handbook of British birds. London.

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#### APPENDIX Procedure of DNA analysis

DNA was isolated from a toepad sample using a QIAgen QIAamp DNA Micro Kit following the manufacturer's instructions, with the addition of 0.1 M dithiothreitol to the proteinase K digest. Two fragments of the mitochondrial COI gene were amplified using the primers: PufCOIF1 (5'-GGATTCGGAACTGACTAG-3'), PufCOIR1 (5'-CCT-GCTCCTGCTTACTG-3'), PufCOIF2 (5'-CAATCAACT-CATATACAACAGC-3') and PufCOIR2 (5'-CTGGGAGTGA-

GAGTAGGAG-3'), using PCR conditions as described in Hebert et al (2004). The PCR products were separated by electrophoresis on a 1.5% agarose gel and extracted using the QIAgen QIAquick Gel Extraction Kit and sent for Sanger sequencing by Source Bioscience (Nottingham, England). The returned sequences were aligned in CLC Sequence Viewer 8, checked by eye and concatenated to give a 233 bp fragment of COI sequence (Accession No LR742719).

# Alaskastrandloper bij Westhoek in augustus 2019

Wim van Zwieten & Enno B Ebels

Sinds een jaar of vijf ben ik (Wim van Zwieten) met vogelen bezig. Het begon met het fotograferen van vogels in mijn tuin maar dat liep al snel uit de hand en ik trok de provincie (Friesland) en al snel ook het land in. Na een jaar ben ik serieus aan een jaarlijst begonnen en zo werd het twitchen een groot avontuur. Voor 2019 had ik mij voorgenomen om de jaarlijst de jaarlijst te laten en me meer te richten op zelf vogels zoeken en leukere foto's maken. Westhoek, Friesland, ligt zo'n beetje in mijn achtertuin en ik werd al snel gefascineerd door de grote aantallen steltlopers die daar met name in de nazomer bivakkeren op de hoogwater-vluchtplaats. Regelmatig kwam ik daar ervaren vogelaars tegen en ik verbaasde mij erover dat zij uit die enorme aantallen vogels toch de 'specials' wisten te trekken, zoals Strandplevier *Anarhynchus alexandrinus*, Breedbekstrandloper *Calidris falcinellus*, Bonapartes Strandloper *C fuscicollis* en beide soorten franjepoten *Phalaropus*: dat wilde ik ook kunnen.

Daarom was ik in 2019 regelmatig op Westhoek te vinden. Omdat de omstandigheden als hoog/laag water en windsterkte en -richting een grote rol spelen, is het aantal geschikte dagen beperkt. Ook de drukte van aantallen vogelaars en vooral toeristen en hondenuitlaters is van grote invloed op het

aantal vogels dat je kunt zien. Op 15 augustus ging ik voor de zesde keer naar de slibreep en ik was vrijwel alleen, afgezien van een fotograaf in zijn camouflagetentje 300 m verderop. Het aanbod vogels was redelijk groot en bij het aflopende water keerden grote groepen steltjes terug van de binnendijkse akkers. De Bonte Strandlopers *C alpina*, Krombekstrandlopers *C ferruginea*, Kanoeten *C canutus*, Tureluurs *Tringa totanus* en andere steltlopers bewogen mee met de lijn van het langzaam terugtrekkende water. Op de reeds drooggevallen stukken wad kwamen wat Bontbekplevieren *Charadrius hiaticula* foerageren. Van Sietsje Bernardus had ik geleerd dat de spannendste vogels zich vaak tussen deze plevieren ophouden. Tijdens het opkomende water had ik een Breedbekstrandloper ontdekt dus mijn dag was al goed. Nu scande ik de zandstroken, zittend in het groen langs het wad. Als ik een niet voor mij direct te herkennen individu tegenkwam dan maakte ik daar foto's van. Ook een gevalletje 'klein beestje met lange snavel' viel daar onder. Ik volgde hem met de camera op c 30 m en maakte een aantal foto's. Deze vogel was ongeveer even groot als de Kleine Strandloper *C minuta* die zijn pad kruiste. Hij foerageerde driftig om zich heen pikkend, daarbij soms een stukje snel lopend (als een Drie-

215 Alaskastrandloper / Western Sandpiper *Calidris mauri*, adult, Bonte Strandloper / Dunlin *C alpina*, adult, en Bontbekplevieren / Common Ringed Plovers *Charadrius hiaticula*, Westhoek, Friesland, 15 augustus 2019 (Wim van Zwieten)



teenstrandloper *C alba*), en stond soms even stil en ging dan even poetsen en slapen. Ik zag de fijne streepjes op de flank en op de achterzijde van het lijf en dacht aan een Bonapartes Strandloper. Maar die soort kende ik en ik wist dat die ranker en meer langgerekt was. Kon het het een van die andere strandlopers zijn op 'de Amerikanen-pagina van de ANWB-gids'? De kenmerken en de gids had ik niet bij de hand, dus ik zou die avond wel verder kijken. Ik bleef nog een paar uur buiten en thuisgekomen kroop ik na het avondeten achter de computer om alle foto's te bekijken. Met de ANWB-gids erbij was 'mijn' strandloper snel opgezocht: de vogel leek het meest op een Alaskastrandloper *C mauri*. Via Facebook stuurde ik Wietze Janse en Pim Wolf (omdat die online waren) een foto. De meningen waren verdeeld van 'heel spannend' tot een 'klein bontje'. Aanvullende foto's die ik had geplaatst op de determinatiepagina op Facebook hadden een explosieve uitwerking... Nog geen 10 minuten later kwam er al een Dutch Bird Alert met de boodschap 'Alaskastrandloper'; ik werd dus opgeschrikt door mijn eigen waarneming die als een raket de wereld was ingestuurd. Mijn telefoon en sociale media zijn vervolgens twee uur lang bezet geweest, met felicitaties en vragen: wie, wat, waar, hoe, wanneer, hoe laat...?

De volgende ochtend zou het om c 11:30 hoogwater zijn. Veel vogelaars rekenden er op dat de vogel rond die tijd of daarna (bij afgaand water) teruggevonden zou (kunnen) worden. Vanaf 08:00 die dag had Han Zevenhuizen echter al een verdacht strandloperkje in beeld dat ver weg foerageerde op het wad en samen met c 15 andere vroege vogelaars werd het hem steeds duidelijker dat dit de Alaskastrandloper moest zijn, hoewel de afstand erg groot was. Om 08:30 ging het bericht uit via Dutch Bird Alerts dat de vogel was teruggevonden en tot c 10:00 liet hij zich bijna continu bekijken op langzaam afnemende (maar nog altijd forse) afstand, waarbij geleidelijk wat meer details zichtbaar werden. Na c 10:00 werd het water snel hoger en de groep met meer dan 10 000 strandlopers werd steeds compacter en beweeglijker, waardoor de Alaskastrandloper steeds moeilijker was terug te vinden; tot 10:40 waren er nog enkele kortstondige waarnemingen. Daarna verdwenen alle steltlopers binnendijks om het hoogwater af te wachten; terugvinden van de Alaskastrandloper op de akkers bleek een onmogelijke opgave. Vanaf c 12:30 keerden de steltlopers terug en om c 13:00 vonden onder meer Max Berlijn en Enno Ebels de vogel terug, redelijk aan de voorrand van de groepen steltlopers en vaak solitair foeragerend. Veel waarnemers kon-

den hem nu opnieuw bekijken of zagen hem voor het eerst. Na 14:00 verdween hij weer langzaam uit beeld, steeds verder weg foeragerend op het wad. In de avond (met opkomend tij) werd hij weer door een klein aantal vogelaars gezien. Op zaterdag, zondag en maandag (17-19 augustus) herhaalde dit schouwspel zich maar op deze dagen werd de vogel voornamelijk bij afgaand tij gezien en gedurende kortere tijd. Zoekacties op 20 augustus en op latere dagen door enkele 10-tallen vogelaars leverden niets meer op.

### Beschrijving

De beschrijving is opgesteld aan de hand van foto's van WvZ en videobeelden van Leo Boon; meer foto's zijn te vinden op [www.waarneming.nl](http://www.waarneming.nl) maar vanwege de grote waarnemingsafstand voegen deze weinig toe aan de determinatie.

**GROOTTE & BOUW** Kleine strandloper, formaat c twee derde van Bontbekplevier of Bonte Strandloper. Kortere poten dan Bonte. Vleugelprojectie kort, waardoor compact ogend. Met name in rust schijnbaar voorover vallend door kort achterreinde en relatief zware voorkant. Snavel lang en licht gebogen, lengte c twee keer afstand tussen voorkant oog en snavelbasis. Op foto's en videobeelden aanwezigheid van kleine webjes tussen tenen zichtbaar, mogelijk versterkt door 'meenemen' van modder; 'klompvoetjes' ook af en toe zichtbaar in het veld (Dick Groenendijk in litt).

**KOP** Overwegend grijs gestreept op lichte ondergrond. Bovenkop donkerder, met name op voorhoofd. Wenkbrauwstreep licht en weinig opvallend, meest zichtbaar voor oog en niet gevorkt. Teugel donker.

**BOVENDELEN** Overwegend bruingrijs met verspreide donkere veren; centrum van donkere veren licht. Op schouderveren beperkte roodbruine tekening aanwezig. Minimaal twee achterste schouderveren op linkerdeel vogel met ankerpatroon (donker anker met aan weerszijden lichte ovale vlekken).

**ONDERDELEN** Keel, middenborst, buik en anaalstreek wit. Zijborst grijs gestreept, meest intensief ter hoogte van vleugelboog (op afstand als donkere zijborst overkomend) en meer verspreid op middenborst, vlekkerige borstband vormend. Streping op flank doorlopend als losse vlekjes tot ver op achterflank. Vorm van enkele vlekjes pijlvormig met punt richting staart.

**VLEUGEL** Bovenvleugel overwegend donkergrijs. Tertiairs grijsbruin. Lichte vleugelstreep, minder opvallend dan bij Bonte Strandloper.

**STAART** Bovenstaart donker met lichter middendeel.

**NAAKTE DELEN** Snavel geheel zwart. Iris donker. Poot zwart.

**RUI & SLEET** Enkele schouderveren grijs en met weinig tekening, duidend op geruide winterveren.

**GEDRAG** Losjes optrekkend met andere steltlopers, meestal samen met Bontbekplevieren of Bonte Strandlopers. Meestal aan rand van compacte groep en vaak alleen foeragerend, bij voorkeur op iets drogere delen en



216-218 Alaskastrandloper / Western Sandpiper *Calidris mauri*, adult, Westhoek, Friesland, 15 augustus 2019 (Wim van Zwieten) 219 Alaskastrandloper / Western Sandpiper *Calidris mauri*, adult (rechts), met Kleine Strandloper / Little Stint *C minuta*, Westhoek, Friesland, 15 augustus 2019 (Wim van Zwieten). Webjes tussen tenen aan beide poten.

dichter bij schaarse begroeiing dan meeste andere strandlopers. Meestal rustig lopend en pikkend, soms wat sneller en actiever rennend. Regelmatig kleine stukken vliegend. Bij hoog water overtijdend met 10 000en andere strandlopers op binnendijkse akkers (maar daar niet waargenomen).

GELUID Niet vastgesteld.

### Determinatie

Dankzij de goede foto's van de eerste avond verliep de determinatie relatief eenvoudig. Het kleine formaat (vergeleken met de aanwezige Bontbekplevieren en Bonte Strandlopers) gaf aan dat het om één van de 'stints and peeps' ging, de groep van kleine strandlopers; Bonapartes Strandloper en Bairds Strandloper *C bairdii* zijn iets groter en vallen gelijk af door hun lange vleugels, die in zit ruim voorbij de staart steken en in het veld een lang 'achterind' creëren. Voor de determinatie van

deze groep kleine strandlopers, zie, eg, Prater et al (1977), Jonsson & Grant (1984), Hayman et al (1986), Veit & Jonsson (1987), Lewington et al (1991), Rosair & Cottridge (2004), Chandler (2009), van Duivendijk (2011) en Svensson et al (2015).

Taigastrandloper *C subminuta*, Kleinste Strandloper *C minutilla* en Temmincks Strandloper *C temminckii* vallen af omdat ze gele of geelgroene poten hebben en een kortere en rechttere snavel; Temmincks heeft daarnaast een meer langgerekte bouw. Kleine Strandloper en Roodkeelstrandloper *C ruficollis* vallen eveneens af, hoewel de zwarte pootkleur overeenkomt. Beide soorten hebben een kortere en rechttere snavel, geen donkere tekening op de flank en een andere tekening op de bovendelen.

De resterende twee soorten, Grijs Strandloper *C pusilla* en Alaskastrandloper, zijn vaak lastig te

TABEL 1 Gevallen van Alaskastrandloper *Calidris mauri* in het West-Palearctische gebied / records of Western Sandpiper *Calidris mauri* in the Western Palearctic (Mullarney 1992, Zino et al 1995, Andrews 1997, Lidster 2004, Dubois et al 2008, Olsen et al 2010, Golley 2011, Erterius & Millington 2012, Copete et al 2015, de Juana & Garcia 2015, Reeber et al 2018, Raritettskommittén 2019; Yann Kolbeinsson in litt, Łukasz Ławicki in litt, Pedro Ramalho in litt, Sébastien Reeber in litt)

Azoren (5)	18 september 2016, Saint-Philbert-de-Grand-Lieu, lac de Grand-Lieu, Loire-Atlantique, eerstejaars
26 september tot 14 oktober 1998, Cabo da Praia, Terceira, juveniel	6 oktober 2016, Ploudalmézeau, Finistère, en 22-25 oktober 2016, Guissény, Anse de Tressény, Finistère, eerstejaars
16 oktober 2002, Cabo da Praia, Terceira, juveniel	
24-28 september 2007, Ginjal, Santa Maria, juveniel	
2-14 september 2009, Cabo da Praia, Terceira, juveniel	
20 september tot 13 oktober 2010, Praia da Vitória, Cabo da Praia, Terceira, eerstejaars	
	Ierland (5)
	3-6 september 1992, North Slob, Wexford, juveniel
	20-21 augustus 1996, The Cull, Wexford, adult
	1-8 september 1999, Ballydehob, Cork, juveniel
	13-14 september 2008, Omev Island, Galway, adult
	23-26 juli 2016, Tacumshin Lake, Wexford, eerste-zomer mannetje
	IJsland (2)
	26-29 augustus 1998, Bakkatjörn á Seltjarnarnesi, Gullbringusýsla, juveniel mannetje (verzameld)
	29 oktober 2007, Garðskagi í Garði, Gullbringusýsla, juveniel
	Madeira (1)
	1 november 1979, São Lázaro, Funchal, vrouwtje (verzameld, balg in Museu Municipal do Funchal)
	Nederland (1)
	15-19 augustus 2019, Westhoek, Friesland, adult
	Noorwegen (1)
	12-13 juli 2008, Revtingen, Klepp, Rogaland, adult
	Spanje (3)
	8 september 1979, Ensenada da Ínsua, A Coruña, juveniel
	19 september 1992, Baldaio, Carballo, A Coruña, juveniel/eerste-winter
	20-23 september 1999, Laguna de Traba, A Coruña, adult
	Zweden (2)
	19-22 augustus 1988, Rönnen, Skålderviken, Skåne, adult
	14-15 juli 2012, Västerstadsviken, Öland, tweede-kalenderjaar
Brittannië (10)	
19 augustus 1969, Tresco, Scilly, Engeland, adult	
21-23 juli 1973, Rainham, Essex, Engeland, adult	
9-12 september 1973, Axmouth, Devon, Engeland	
25 september 1988, Pool of Virkie, Mainland, Shetland, Schotland, juveniel	
9-25 augustus 1997, Musselburgh, Lothian, Schotland, eerste-zomer of adult	
28 september tot 3 oktober 1998, Deerness, Orkney, Schotland, juveniel	
29 september tot 15 oktober 2004, Brownsea Island, Poole Harbour, Dorset, Engeland, juveniel/eerste-winter	
28 november 2011 tot 31 januari 2012, Cley Marshes en Blakeney Harbour, Norfolk, Engeland, eerste-winter	
19-24 september 2012, Hoylake, Cheshire, Engeland, juveniel	
31 augustus tot 4 september 2016, Aird an Runair, North Uist, Outer Hebrides, Schotland, juveniel	
Een vogel op Fair Isle, Shetland, Schotland, van 28 mei tot 3 juni 1956 werd lange tijd beschouwd als eerste geval voor Brittannië maar werd na herziening aanvaard als Grijze Strandloper <i>C pusilla</i> (Pennington et al 2004).	
Frankrijk (7)	
18-19 september 1973, Plouguerneau, Finistère	
22-23 juli 1995, L'Aiguillon-sur-Mer, Vendée, adult	
9-12 september 1998, Les Sables-d'Olonne, Vendée, juveniel	
20-24 september 1998, Guérande, Loire-Atlantique, juveniel	
19 april 2001, Barbâtre, Vendée, eerstejaars	

onderscheiden (cf, eg, Garner 2005); Grijze heeft een kortere snavel met een verdikte snavelpunt maar de variatie in snavelengte is groot en een langsnavelig vrouwtje Grijze kan gemakkelijk met Alaskastrandloper worden verward. Beide soorten hebben opvallende zwarte veercentra op de bovendelen (en beide soorten delen de halfwebjes tussen de tenen, die bij alle andere *Calidris*-soorten ontbreken maar die in het veld meestal niet of

moeilijk zichtbaar zijn). De volgende kenmerken passen echter alleen op Alaskastrandloper en sluiten Grijze uit: **1** kastanjebruine tint op de schouderveren (restant van het zomerkleed) met kenmerkend ankerpatroon op minimaal twee achterste schouderveren; bij Grijze zijn de schouderveren zwart met grijze randen en hebben geen ankervormig patroon (wel een licht centrum, dat vaak moeilijk zichtbaar is door overlappende ve-



FIGUUR 1 Gevallen van Alaskastrandloper *Calidris mauri* in het West-Palearctische gebied (n=36) per decade naar datum van ontdekking (exclusief geval uit april in Frankrijk; cf tabel 1) / records of Western Sandpiper *Calidris mauri* in the Western Palearctic (n=36) per 10-day period by date of discovery (excluding one record from April in France; cf table 1)

ren); **2** lange en iets gebogen snavel zonder duidelijke verdikte punt (korter en rechter bij Grijsze, met duidelijkere verbreding aan de punt, ook bij langsnavelige exemplaren); en **3** pijlpuntvormige donkere vlekjes op zijborst en flank, ver doorlopend op de achterflank. In volledig zomerkleed is Alaskastrandloper veel meer roodbruin dan Grijsze, met roodbruin op de kop, bovendelen en vleugel. Het geluid van beide soorten verschilt ook duidelijk maar was bij de vogel van Westhoek niet van waarde. De aanwezigheid van webjes is gedocumenteerd op ten minste één foto (plaat 219); ook op een aantal videobeelden lijken de webjes zichtbaar; dit beeld kan versterkt zijn doordat de kleine webjes meer modder meenemen waardoor het gebied tussen de tenen eerder 'dichtloopt'. De 'klompvoetjes' waren soms ook in het veld waarneembaar.

### Verspreiding en voorkomen in de WP

Alaskastrandloper broedt langs de westkust van Alaska, VS, en in het uiterste oosten van Siberië, Rusland. De soort overwintert langs de Pacificse kust van British Columbia, Canada, tot Peru en plaatselijk langs de Atlantische kust van het zuiden van New Jersey langs de kusten van de Golf van

Mexico en de West Indies tot Frans Guyana. Vergeleken met de meeste andere Nearctische steltlopers overwintert Alaskastrandloper relatief ver naar het noorden (Hayman et al 1986, Chandler 2009).

Er zijn 37 gevallen in het West-Palearctische gebied (WP), met buiten de Nederlandse vogelgevallen in de Azoren (vijf), Brittannië (10), Frankrijk (zeven), Ierland (vijf), IJsland (twee), Noorwegen (één), Madeira (één), Spanje (drie) en Zweden (twee) (zie tabel 1 voor een compleet overzicht). Het eerste WP-geval was in Scilly, Engeland, in augustus 1969; in de daarop volgende decaden was het aantal gevallen: 1970-79 (vijf), 1980-89 (twee), 1990-99 (12), 2000-09 (acht) en 2010-19 (negen). De beste jaren waren 1998 met vijf gevallen en 2016 met vier. Op één na werden alle vogels ontdekt in het najaar (van midden-juli tot eind november), waarvan de helft (19) in september (figuur 1). Er is slechts één voorjaarsgeval (in Frankrijk op 19 april 2001) en een overwinteraar verbleef in Norfolk, Engeland, van 28 november 2011 tot 31 januari 2012.

De vogel van Westhoek is door de Commissie Daalgasten Nederlandse Avifauna (CDNA) aangevaard als eerste geval voor Nederland.

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## Summary

WESTERN SANDPIPER AT WESTHOEK IN AUGUST 2019 On 15-19 August 2019, an adult Western Sandpiper *Calidris mauri* moulting to winter plumage stayed at Westhoek, Friesland, the Netherlands. Together with 10 000s of larger sandpipers at this famous wader foraging and roosting spot, the bird was only seen in the hours before and after high tide. This was the first record for the Netherlands. There are now 37 records in the Western Palearctic (WP), including 10 in Britain, seven in France, five in the Azores, five in Ireland, three in Spain, two in Iceland, two in Sweden and singles in Madeira, the Netherlands and Norway (table 1). The first WP record was in Scilly, England, in August 1969. In the following decades, the number of records was: 1970-79 (five), 1980-89 (two), 1990-99 (12), 2000-09 (eight) and 2010-19 (nine). The best years were 1998 with five records and 2016 with four (table 1). All excluding one were discovered in autumn (between mid-July and late November), and half of them in September (19 records; figure 1). Only one was in spring (19 April 2001 in France) and one wintered in England (from 28 November 2011 to 31 January 2012 in Norfolk).

## Verwijzingen

Andrews, I 1997. The Western Sandpiper in Lothian. *Birding World* 10: 302-304.  
Chandler, R 2009. Shorebirds of the Northern Hemisphere. London.  
Copete, J L, Lorenzo, J A, Amengual, E, Bigas, D, Fernández, P, López-Velasco, D, Rodríguez, G & García-Tarrasón, M 2015. Observaciones de aves raras en España, 2012 y 2013. *Ardeola* 62: 453-508.  
Dubois, P J, Le Maréchal, P, Oliosio, G & Yésou, P 2008. *Nouvel inventaire des oiseaux de France*. Paris.  
van Duivendijk, N 2011. *Advanced bird ID handbook – the Western Palearctic*. London.  
Erterius, D & Millington, R 2012. Ageing of first-summer

Western Sandpiper. *Birding World* 25: 285-286.  
Garner, M 2005. The Fair Isle sandpiper: a review. *Br Birds* 98: 356-364.  
Golley, M 2011. The Western Sandpiper in Norfolk. *Birding World* 24: 502-509.  
Hayman, P, Marchant, J & Prater, T 1986. *Shorebirds: an identification guide to waders of the world*. London.  
Jonsson, L & Grant, P J 1984. Identification of stints and peeps. *Br Birds* 11: 293-315.  
de Juana, E & Garcia, E 2015. *The birds of the Iberian Peninsula*. London.  
Lewington, I, Alström, P & Colston, P 1991. *A field guide to the rare birds of Britain and Europe*. London.  
Mullarney, K 1992. The Western Sandpiper in County Wexford. *Birding World* 5: 341-343.  
Lidster, J 2004. The Western Sandpiper in Dorset. *Birding World* 17: 429-431.  
Olsen, T A, Bunes, V, Egeland, Ø, Gullberg, A, Mjøltnes, K R & Tveit, B O 2010. *Sjeldne fugler i Norge i 2008*. *Ornis Norv* 33: 4-48.  
Pennington, M, Osborn, K, Harvey, P, Riddington, R, Okill, D, Ellis, P & Heubeck, M 2004. *The birds of Shetland*. London.  
Prater, A J, Marchant, J H & Vuorinen, J 1977. *Guide to the identification and ageing of Holarctic waders*. Tring.  
Raritetskommittén 2019. *Tundrasnäppa / Western Sandpiper Calidris mauri*. Website: <https://tinyurl.com/y2fh6px4>.  
Reeber, S, Blanc, J-F, Jiguet, F & le CHN 2018. Les oiseaux rares en France en 2016 et 2017. *Ornithos* 25: 321-369.  
Rosair, D & Cottridge, D 2004. *Photographic guide to the waders of the world*. London.  
Svensson, L, Grant, P J, Mullarney, K & Zetterström, D 2015. *Collins bird guide*. Second edition (revised). London.  
Veit, R R & Jonsson, L 1987. Field identification of smaller sandpipers within the genus *Calidris*. *Am Birds* 41: 212-236.  
Zino, F, Biscoito, M J & Zino, P A 1995. Birds of the archipelago of Madeira and the Selvagens. New records and checklist. *Bol Mus Mun Funchal* 47: 61-100.

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# Geographical variation in Common Redstart calls

Nicolas Martinez & Ralph Martin

Common Redstart *Phoenicurus phoenicurus* occurs in two subspecies. Nominate *P p phoenicurus* (hereafter *phoenicurus*) breeds across most of the species' range, from Morocco, Spain and Britain in the west to lake Baikal, Russia, in the east. The other subspecies, Ehrenberg's Redstart *P p samamiscus* (hereafter *samamiscus*), has a south-easterly distribution. Its occurrence stretches from eastern Anatolia, Turkey, the southern Caucasus and the Middle East to south-western central Asia (Glutz von Blotzheim & Bauer 1988, Clement & Rose 2015). However, some authors include the whole of Turkey and central Asia in the breeding distribution range of *samamiscus* (Roselaar 1995, Kirwan et al 2008, Shirihai & Svensson 2018). Birds in the Balkan, Crimea and the northern Caucasus may show a mix of features and some consider these to be intergrades between the two subspecies (Glutz von Blotzheim & Bauer 1988, Svensson 1992, Kirwan et al 2008, Martinez 2010, Clement & Rose 2015); more research is needed. Adult males of both subspecies are identified by the presence (*samamiscus*) or absence (*phoenicurus*) of a white wing patch. Given good views, most first-winter males can be identified on other plumage characters, too (Small 2009). Identification of females based

on plumage features is only tentative (Small 2009, Clement & Rose 2015, Shirihai & Svensson 2018). Additionally, contact calls were thought to be a reliable identification feature for some time (Bergmann et al 2008, Small 2009, Ayé et al 2012, Svensson et al 2015): *phoenicurus* was meant to invariably utter a rising, slightly dissyllabic, *huid*, whereas the analogous call of *samamiscus* was described as a *heed* with constant frequency. It was generally assumed that *phoenicurus* shows the *huid* call across its whole range, until phenotypic *phoenicurus* with *heed* calls were observed in the east of its breeding range (Ayé et al 2014). In this study, we analysed calls of Common Redstarts from most parts of its breeding range to get more information about the distribution of the different calls.

## Methods

We collected sound recordings of Common Redstarts (in total 287 individuals). The main source for recordings was [www.xeno-canto.org](http://www.xeno-canto.org) (recordings of 127 individuals). We considered all recordings of calls available from the breeding period (May-July) published on this website by the end of July 2019. We added six birds of *samamiscus* from the second half of April, which sang the

FIGURE 1 Illustration of how measurements were taken from sonagrams for different call variants. Red crosses mark position from which we noted time and frequency. Gradient (blue line) was calculated by dividing frequency difference between 1st and 2nd frequency (1st Freq/2nd Freq) point by length.



## Geographical variation in Common Redstart calls



FIGURE 2 Variation of different types of calls of Common Redstart *Phoenicurus phoenicurus*. **1** Typical example of *huid* call in central Europe. Most of recorded *huid* calls strongly resemble this and following example. Male, Gütersloh, Germany, 9 June 1987 (*Klaus Conrads; TSA 0148*); **2** female, Lombardia, Italy, 27 May 2016 (*Francesco Sottile; XC318770*); **3** extraordinary steep example, Hautes-Alpes, France, 17 May 2011 (*Peter Boesman; XC270190*); **4** Staffordshire, England, 6 May 2018 (*Dominic Garcia-Hall; XC414853*); **5** female, Cheboksary, Russia, 22 June 2013 (*Albert Lastukhin; XC139395*); **6** especially birds from eastern distribution range showed very pronounced difference in gradient between beginning and end of call. Korgalzhyn, Kazakhstan, 3 May 2013 (*Thijs Fijen; XC145071*); **7** moreover, two of three birds from Mongolia had downward inflected end. Tereldsh, Mongolia, 11 June 1979 (*Dieter Wallschläger*); **8** this and three following calls are examples of commonest call variant in Italy north to Alps. Toscana, Italy, 15 June 2011 (*Marco Dragonetti; XC118530*); **9** Calabria, Italy, 3 July 2015 (*Francesco Sottile; XC254972*); **10** Italy, May 2011 (*Simona Inaudi; ornitho.it*); **11** Ticino, Switzerland, 30 June 2011 (*Tanya Harvey Ciampi; Youtube*); **12** Huelva, Andalucía, Spain, May (*Alberto Plata Ortiz*); **13** this and following recording show extraordinary records of *heed* calls in terms of geography. Stromberg, Rheinland-Pfalz, Germany, 15 June 2015 (*Frank Holzapfel; XC254143*); **14** Dividal, Troms, Norway, 23 June 2011 (*Stein Ø Nilsen; XC92981*).

typical song of this subspecies (based on Ayé et al 2014) and therefore likely defended a territory (southern birds arrive earlier at their breeding sites; Glutz von Blotzheim & Bauer 1988). In order to get a more representative collection from specific regions, additional material (number of individuals used given in parentheses) from May to July as well as from birds where videos proved that they were obviously breeding was included from: [www.youtube.com](http://www.youtube.com) (59 individual), own and privately shared recordings (38), [www.facebook.com](http://www.facebook.com) (17), [www.macaulaylibrary.org](http://www.macaulaylibrary.org) (13), several ornitho-platforms (12; Austria, France, Germany, Italy, Spain, Switzerland), [www.tierstimmenarchiv.de](http://www.tierstimmenarchiv.de) (7), [www.observation.org](http://www.observation.org) (3), [www.hbw.com/ibc](http://www.hbw.com/ibc) (1), [www.tarsiger.com](http://www.tarsiger.com) (2), [www.vimeo.com](http://www.vimeo.com) (2), [www.mdahlem.net](http://www.mdahlem.net) (1), [www.birdsong.it](http://www.birdsong.it) (1)

and [www.sounds.bl.uk](http://www.sounds.bl.uk) (1). We determined the call variant(s) for each recording by listening to the recording and checking the sonagram. Therefore, all recordings were converted to 44 kHz wav files (16 bit). Sonagrams were made with Raven (Bioacoustics Research Program 2014). We used Kaiser-Window to visualize the calls in combination with a sample overlap of 95% and a DFT size of 500 samples.

We categorised the calls qualitatively based on previous described categories (*huid* and *heed*), and if that was not possible, we made new categories. For a definition of the call variants see section 'Results'. Just one recording was considered if several recordings of the same call variant at the same site in the same year were available, unless it was clear that different birds were involved.

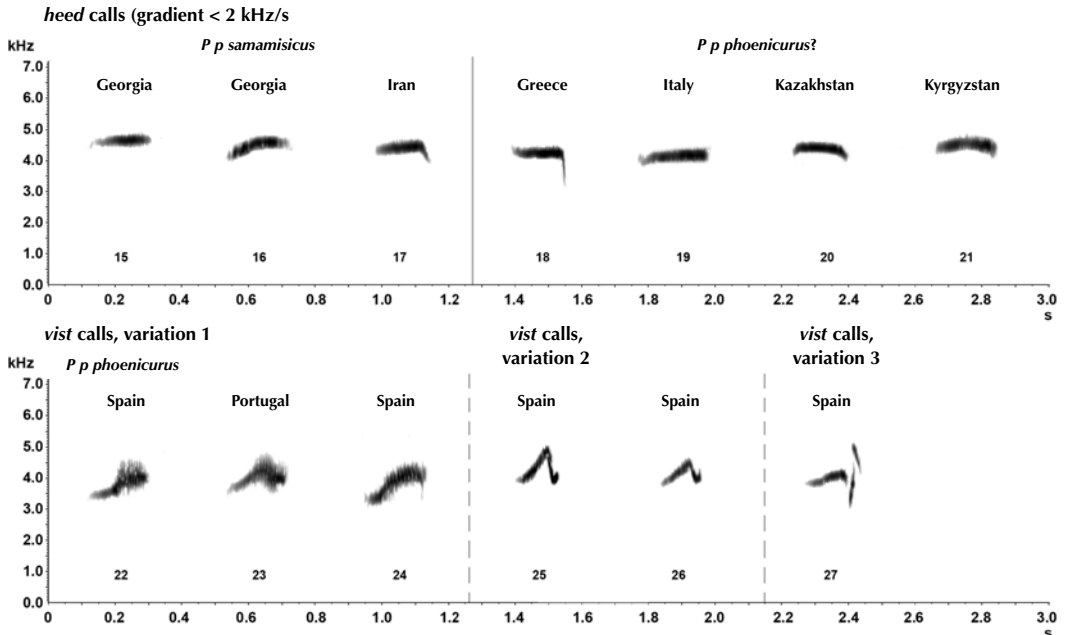


FIGURE 2 (continued) **15** male, Samtskhe-Javakheti, Georgia, 6 July 2013 (*Jarmo Pirhonen*; XC142822); **16** one out of only three rising *heed* calls from breeding range of *P p samamiscus*, still quite ‘flat’ in sonagram. Georgia, 31 May 2018 (*Aslan Bolkvadze*; Facebook); **17** Roodbarak, Mazandaran, Iran, 15 April 2017 (*Patrik Åberg*; XC405281); **18** this call was recorded in supposed intergradation zone. Male bird showing features of *P p samamiscus*, Thrace, Greece, 16 May 1976 (*Hans-Heiner Bergmann*); **19** following three calls show constant *heed* calls from *P p phoenicurus* breeding ranges. Bird from call 19 is same bird as in plate 220. Teramo, Abruzzo, Italy, 28 May 2016 (*Dimitri Marrone*; XC318906); **20** this bird switched regularly between these *heed* calls and typical *huid* calls. Astana, Kazakhstan, 4 July 2015 (*Youtube*); **21** Ala Archa NP, Kyrgyzstan, 18 May 2015 (*Ralph Martin*; XC312877); **22** male, Gijón, Asturias, Spain, 24 May 2011 (*Youtube*); **23** female, Lisboa, Portugal, 17 May 2009 (*Magnus Robb*); **24** Lugones, Asturias, Spain, breeding period 2014 (*Vimeo*); **25** note pronounced downward inflection at end of call, which is typical for *vist* variant type 2 and 3. Andalucía, Spain, 19 May 2015 (*José Carlos Sires*; XC274770); **26** Andalucía, Spain, 7 June 2015 (*José Carlos Sires*; XC279476); **27** Andalucía, Spain, 21 May 2016 (*José Carlos Sires*; XC319577).

In a statistical analysis, we tested for sexual and geographical differences in the calls. Therefore, we took several measurements (figure 1) and calculated the gradient (kHz/s) of the call by dividing the difference between 1st and 2nd frequency through the timespan. As calls within individuals were relatively stable, we chose one representative call per individual for testing. We fitted a linear model to the measurements of the *huid* calls (101 sexed and 96 unsexed individuals) and another one to the measurements of the *heed* calls (23 sexed and 44 unsexed individuals), using the ‘lm’ function of the statistics package of R (R Core Team 2016), to check for differences of the calls between sexes as well as geographic differences. We checked various diagnostics of model validity and stability. The fit of the models met the assump-

tions of normality and homogeneity of residuals (Quinn & Keough 2002, Field 2005). We analysed the influence of longitude, latitude, their interaction and sex on the gradient of the call, 1st and 2nd frequency and call length.

## Results

### Call variants of Common Redstart

We analysed 287 individuals, covering most parts of the species breeding range. The following call variants were detected: rising *huid*, rising or constant *heed* calls and three variants of a *vist* call (figure 2). *Huid* and *heed* calls are well known but the variability of *heed* calls was much higher than previously known. For a few calls it was thus far from straightforward to assign them to either vari-

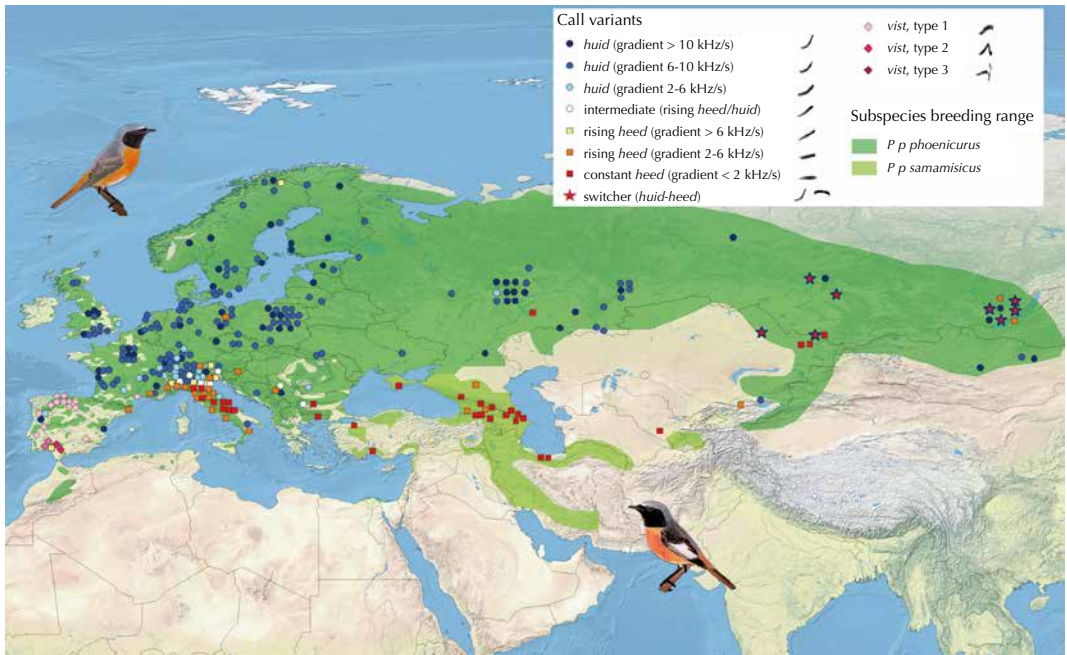


FIGURE 3 Distribution of call variants across breeding range of Common Redstart *Phoenicurus phoenicurus*. Each marker corresponds to an individual. If markers covered each other, we slightly shifted points to retain visibility. Map sources: www.birdlife.com (breeding range) and Natural Earth (www.naturalearthdata.com, background, countries). Subspecies ranges based on Shirihi & Svensson (2018); note, however, that some authors consider birds of Balkan peninsula and western Turkey to be intergrades. Note that there are no recordings for one individual from Altai mountains and one from lake Baikal, that were switching between *huid* and *heed* call variants (Raffael Ayé & Balduin Fischer pers comm). As stated in text, recording quality of three birds from Spain labelled as *vist* type 1 does not allow to decide if their calls are better assigned to *vist* or *heed* calls.

ant (*huid* or *heed*) and some had to be classified as intermediate. We have retained the two variants, however, as the calls in previous publications were classified as such. *Vist* calls had not been described before to our knowledge. Call variant was stable within an individual, with the exception of at least eight birds from Kazakhstan and Russia switching between *huid* and *heed* calls. All call variants were regularly combined with ticking alarm calls and do not seem to differ in this respect.

#### Rising *huid* call

This is the classic call of *phoenicurus* that central and northern European birdwatchers are familiar with and can be best described by *huid*. All but three birds (n=170) used *huid* calls (98%, figure 3) within the breeding area of *phoenicurus* in Central Europe north of the Alps, Britain, Fennoscandia and European Russia. The call is clearly uprising (similar to the contact call of Willow Warbler *Phylloscopus trochilus*), with a mostly low starting

frequency. Gradient increases towards the end of the call, which makes the call sound disyllabic. In the linear model, sex had no significant effect on the measured values. Therefore, we ran another model without 'sex' as a covariate to increase the sample size by using the unsexed birds as well. Latitude and longitude showed significant effects on gradient, 1st and 2nd frequency and call length (appendix 1 and 2). Gradient increased from south-west to the north-east while call length increased from south-east to north-west (appendix 3). 1st frequency was highest in the south-east and lowest in the north-east, while 2nd frequency was lowest in the south-west and north-east and highest in the north-west and south-east.

#### Heed call

The *heed* calls form a line with a constant, rising or slightly decreasing gradient when visualised in a sonagram. Calls given at constant frequency (reminiscent of the slightly higher pitched contact calls of Collared Flycatcher *Ficedula albicollis*) are



FIGURE 4 'Switcher', using *huid* and *heed* calls. Adult, female, same bird as in plate 221. Mikhaylovka, Irkutsk Oblast, Russia, 19 June 2019 (Ralph Martin).

known as the typical *samamiscus* call. We found only this call type from the breeding range of *samamiscus* ( $n=20$ ; two calls showed a gradient  $>2.0$  kHz/s, none exceeded 4.0 kHz/s), but also on the Balkan and in Italy including adjacent regions from Austria, southern France and Switzerland. *Heed* calls with a rising gradient are especially widespread in the southern Alps with a fluent transition to *huid* calls with a small gradient. As a consequence, several calls had to be classified as intermediate (Alps, northern Balkan, figure 3). Rise in pitch of *heed* calls become roughly audible when starting and ending frequency differ by at least 0.3 kHz (but note that there are substantial differences between observers in this respect). *Heed* calls were also detected in Kyrgyzstan close to the south-eastern border of the *phoenicurus* range, and in the Russian Far East and Kazakhstan, where several birds combined this call type with the *huid* call ('switchers' in figure 3-4).

In the linear model, sex had no significant effect on the measured values, but sample size was very small ( $n=23$ ). However, as sex had no significant effect for the *huid* calls either, we ran another model without 'sex' as a covariate to increase the sample size by using the unsexed birds as well. Latitude and longitude showed significant effects on gradient, 1st and 2nd frequency but not on call length (appendix 4 and 5). Gradient increased while 1st and 2nd frequency decreased from south-east to north-west (appendix 6).

#### Variations of *vist* calls

We found highly differing calls in Iberia (plus one call from adjacent south-western France). Here, Common Redstart is patchily distributed and restricted to mountainous regions, especially in the south (see figure 3). Some birds showed intermediate calls between *heed* and *huid* but with a

rough or hoarse sounding in some, thanks to a quickly modulated uprising call (*vist* variation 1). Most south-western calls (*vist* variations 2 and 3) had a prominent downward inflection in the end in common (calls reminded a Common Chiffchaff *Phylloscopus collybita* with *sweo* calls), and some showed even further uprising and decreasing elements (variation 3). These calls are reminiscent of calls of Black Redstart *P. ochruros* but are given at lower frequencies (*vist* calls in Common Redstarts start at frequencies between 3.0 and 3.8 kHz, the highest point in the sonagram equalled 4.4-5.2 kHz. Contrarily, Black Redstart calls range roughly from 4.5 up to 6.0 kHz at the highest point). A total of three recordings from Spain (2) and Portugal (1) with low recording quality sound similar to *heed* calls (and maybe they are) but recording quality is not sufficient to exclude further variants of *vist* calls.

#### Discussion

In this study, we analysed call variation of Common Redstart of most parts of its distribution range. *Phoenicurus* of the north-western population uttered almost exclusively *huid* calls. Birds from the *samamiscus* breeding range only used *heed* calls and the majority of calls of *samamiscus* showed almost no gradient. We found birds giving *heed* calls on the Balkan (in line with the hypothesis of an intergradation zone in this region; Matvejev & Vasi 1973, Clement & Rose 2015) and even in southern France and, more so, on the Italian peninsula, where surprisingly few birds with *huid* calls were recorded (just two *huid* callers out of 17 birds from Italy south of Genova). Calls of some of these *heed* calling birds were identical to calls that were considered to be typical of *samamiscus*. In these regions, at least from time to time, unusual birds with rather prominent white wing patches seem to occur, and some were



**220** Common Redstart / Gekraagde Roodstaart *Phoenicurus phoenicurus phoenicurus*, second calendar-year male, Teramo, Abruzzo, Italy, 24 April 2016 (*Dimitri Marrone*). This breeding bird repeatedly gave constant *heed* calls (cf figure 2, call 19). Note that it has lost its tail. Most *P p samamisticus* of same age show some whitish base to secondaries (Small 2009). **221** Common Redstart / Gekraagde Roodstaart *Phoenicurus phoenicurus phoenicurus*, adult female, Mikhaylovka, Irkutsk Oblast, Russia, 20 June 2019 (*Ralph Martin*). Only female in our study that switched between *huid* and *heed* calls was this male-like coloured bird (cf figure 4). **222** Common Redstart / Gekraagde Roodstaart *Phoenicurus phoenicurus phoenicurus*, adult male, Sierre de las Nieves, Andalucía, Spain, 30 May 2016 (*Ricky Owen*). Bird from southern Iberia, whose breeding birds give highly distinct *vist* call variants 2 and 3.

claimed to be *samamisticus*. According to Small (2009), seven claims come from southern France, but none was sufficiently documented to exclude any *phoenicurus* with extensive pale fringing on secondaries and, subsequently, the French rarities committee has not accepted them (*Frédéric Jiguet* pers comm). There are two records of *samamisticus* in Italy. The first, a bird from Lampedusa on 26 September 2007, mentioned in Ruggieri & Sighele (2008), Small (2009) and Clement & Rose (2015), should possibly be re-evaluated in light of new knowledge (*Andrea Corso* pers comm; see also rejected bird in the Netherlands, cf Wassink & Ebels (2005)). The second has been caught at a

ringing station on the small Pontine island Ventotene on 2 May 2019 ([www.ornitho.it/index.php?m\\_id=54&backlink=skip&mid=289548](http://www.ornitho.it/index.php?m_id=54&backlink=skip&mid=289548), *Jacopo Barchiesi* pers comm). With only one or two certain records from the region, it is reasonable to assume that pure *samamisticus* are at least genuinely rare in southern France and Italy and the high proportion of *heed* callers here is unlikely to be explained by *samamisticus* vagrants. Furthermore, it is worth emphasizing that some of the Italian birds giving *heed* calls (constant and rising) were photographed or filmed, and none of the males showed a prominent white wing panel as would be expected in adult *samamisticus*. We

thus exclude the possibility that these birds were pure *samamiscus*. However, the increase of the gradient of the *heed* calls to the north-west might be a hint for introgression of *samamiscus* into *phoenicurus* in the Balkan and Italy (if calls are inherited in the Common Redstart). Hogner et al (2012) analysed mtDNA in Common Redstart. Unfortunately, their markers did not separate *phoenicurus* and *samamiscus* but Ertan (2002) used methods which showed differences between both subspecies but also high gene flow between them, supporting a large mixing zone. It is possible that the corresponding locus or loci for call inheritance can introgress independently from plumage patterns. Typically, morphological characters are used to distinguish between subspecies but here they do not seem to be conclusive, as the line between *phoenicurus* and *samamiscus* is drawn very differently by different authors (including the Balkan as large contact zone in Clement & Rose (2015) while Shirihihi & Svensson (2018) define birds in western Turkey as intergrades) or to be obscured by second calendar-year male *samamiscus* with juvenile primaries that may have been sometimes misidentified as *phoenicurus*.

In eastern regions, where *samamiscus* and *phoenicurus* might get in contact on migration or thanks to overshooting birds, *heed* calls occur as well (in the Altai, Ayé et al 2014; Tian-Shan, lake Baikal and north of the Caspian Sea, figure 3). Surprisingly, birds able to switch between *huid* and *heed* calls occur there. While in the beginning, it seemed that the description of two such birds was more unusual (Ayé et al 2014), we were now able to find a total of eight such ‘call switching’ birds (almost half of the birds recorded in the Far East). Indeed such birds might be often overlooked, as at least some birds seemed to switch between the two calls only when they were very agitated. With little agitation, however, just one call variation was uttered and they would have been classified as typical *huid* or *heed* callers during a brief encounter. This leads us to conclude that call switching from *huid* to *heed* occurs regularly in Far Eastern populations. While we did not find any hint of such call switching in Western Europe during our analyses, NM found one female in Switzerland shortly before publication of the present article, that uttered few *heed* calls, but *huid* calls were the norm (XC562589). Thus, call switching may very rarely be present even in Western Europe.

Another unexpected finding for such a common species in Europe was the existence of calls in Iberia which are very different from the hitherto

described calls of Common Redstart. There might be a geographical pattern of the different *vist* calls, however, *vist* variation 2 and *vist* variation 3 calls were found close to each other with very small sample sizes and might be just a variant of the same call. We also do not know what the transition between these *vist* calls looks like, nor if the three *huid* calls and the two *heed* calls from Iberia (figure 3) were just from very late migrants or if these calls occur regularly here, too. Although *vist* calls of these Iberian birds are quite different from calls of all other *phoenicurus* populations, we noticed that song does not differ in length and variability of the introductory part. Thus, we agree with the findings of Ayé et al (2014) that song in *phoenicurus* seems to be very constant across the whole breeding range.

To sum up, it would be interesting to obtain more recordings of Common Redstart calls of breeding birds from the Iberian Peninsula and, even more, from the Maghreb as well as from the south-eastern *phoenicurus* range in Kyrgyzstan and eastern Kazakhstan and westernmost China and from *samamiscus* birds from Tajikistan and Uzbekistan.

## Conclusions

Following our data, *huid* calls seem to be restricted to *phoenicurus* as we found no *samamiscus* giving this call variant. Moreover, *heed* and especially rising *heed* calls seem to be common near contact zones of both subspecies. Variation of the calls of *phoenicurus* is larger than previously thought. We found undescribed call variants in Iberia and *heed* calls to be common in southern Europe, especially in Italy, perhaps originating from genetic introgression with *samamiscus* (maybe independent of plumage features). Thus, a *heed* calling Common Redstart can no longer be considered as a valuable *samamiscus* candidate or even an ‘Eastern Common Redstart’ anymore. We recommend that in central and western Europe, only very typical adult male birds should be recognized as *samamiscus* (features given in Small 2009). However, the documentation of less typical birds would be helpful to better understand the total variation and a thorough study of plumage characters in suspected intergradation zones of *phoenicurus* and *samamiscus* would be much appreciated.

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## Samenvatting

**GEOGRAFISCHE VARIATIE IN ROEP VAN GEKRAAGDE ROODSTAART** Gekraagde Roodstaart *Phoenicurus phoenicurus* heeft twee ondersoorten waarvan de nominaat *P p phoenicurus* (hierna *phoenicurus*) als broedvogel voorkomt in het grootste deel van het verspreidingsgebied, namelijk van Marokko, Spanje en Brittannië in het westen, tot het Baikalmeer, Rusland, in het oosten. De ondersoort *P p samamiscus* (hierna *samamiscus*) heeft een meer zuidoostelijke verspreiding. Adulte mannetjes van *samamiscus* zijn van *phoenicurus* te onderscheiden door de aanwezigheid van een witte vleugelvlek. Ook eerste-winter mannetjes zijn doorgaans goed te onderscheiden, maar een betrouwbare determinatie van vrouwtjes is niet mogelijk. Van het verschil in contactroep tussen beide ondersoorten werd aangenomen dat het een betrouwbaar kenmerk was. De contactroep van *phoenicurus* kan omschreven worden als een stijgend *hoe-wied*, terwijl de contactroep van *samamiscus* klinkt als een op gelijke toonhoogte blijvend *hied*. In dit artikel worden opnames van de contactroep uit vrijwel het gehele verspreidingsgebied van Gekraagde Roodstaart geanalyseerd om meer inzicht te krijgen in de variatie en verspreiding van de contactroep. In totaal werden hiervoor opnames gebruikt van 287 roepende individuen uit de broedperiode (mei-juli).

Naast de voor *phoenicurus* karakteristieke stijgende *hoe-wied*-roep, werden ook meerdere varianten van de *hied*-roep vastgesteld en een nog niet eerder beschreven *viest*-roep. In het noordwestelijke deel van het verspreidingsgebied van *phoenicurus* werd bijna alleen de kenmerkende *hoe-wied*-roep geregistreerd en in het verspreidingsgebied van *samamiscus* alleen de *hied*-roep. Binnen het verspreidingsgebied van *phoenicurus* werden op de Balkan zowel de klassieke *hoe-wied*-roep als meerdere varianten van de *hied*-roep vastgesteld en ook in Italië werd de *hied*-roep veel genoteerd en was veel variatie in die roep aanwezig. De niet eerder geregistreerde *viest*-roep werd vastgesteld op het Iberisch Schiereiland. Daarmee is de variatie in contactroep van Gekraagde Roodstaart groter dan gedacht, met name in het verspreidingsgebied van *phoenicurus*. De veelvuldig vastgestelde *hied*-roep in Italië kan afkomstig zijn van genetische introgressie met populaties van *samamiscus*. Daarmee is dus een *hied* roepende Gekraagde Roodstaart niet per definitie een kandidaat *samamiscus* als dit niet in de eerste plaats wordt ondersteund door verenkleedkenmerken.

## References

- Ayé, R, Martinez, N & Stalling, T 2014. The vocalisations of 'Ehrenberg's Redstart'. *Br Birds* 107: 26-36.  
Ayé, R, Schweizer, M & Roth, T 2012. *Birds of Central Asia – Kazakhstan, Turkmenistan, Uzbekistan, Kyrgyz-*



- stan, Tajikistan and Afghanistan. London.
- Bergmann, H-H, Helb, H W & Baumann, S 2008. Die Stimmen der Vögel Europas. Wiebelsheim.
- Bioacoustics Research Program 2014. Raven Pro: Interactive sound analysis software (version 1.5). Ithaca.
- Clement, P & Rose, C 2015. Robins and chats. London.
- Ertan, K E 2002. Evolutionary biology of the genus *Phoenicurus*. Phylogeography, natural hybridization and population dynamics. PhD thesis, University Tübingen. Marburg.
- Field, A 2005. Discovering statistics using SPSS. Thousand Oaks, California.
- Glutz von Blotzheim, U N & Bauer, K M (editors) 1988. Handbuch der Vögel Mitteleuropas 11/II. Wiesbaden.
- Hogner, S, Laskemoen, T, Lijfeld, J T, Porkert, J, Kleven, O, Albayrak, T, Kabasakal B & Johnson, A 2012. Deep sympatric mitochondrial divergence without reproductive isolation in the common redstart *Phoenicurus phoenicurus*. *Ecol Evol* 2: 2974-2988.
- Kirwan, G M, Boyla, K A, Castell, P, Demirci, B, Özen, M, Welch, H & Marlow, T 2008. The birds of Turkey. The distribution, taxonomy and breeding of Turkish birds. London.
- Martinez, N 2010. The Crimean Peninsula: a zone of integration of Common Redstart subspecies? *Br Birds* 103: 405-406.
- Matvejev, S D & Vasi, V F 1973. *Catalogus Faunae Yugoslaviae*. Ljubljana.
- Quinn, G P & Keough, M J 2002. *Experimental designs and data analysis for biologists*. Cambridge.
- R Core Team 2016. *R: A language and environment for statistical computing*. Vienna. [www.R-project.org](http://www.R-project.org).
- Roselaar, C S 1995. *Songbirds of Turkey – an atlas of biodiversity of Turkish passerine birds*. Haarlem.
- Ruggieri, L & Sighele, M 2008. *Annuario 2007*. Verona.
- Shirihai, H & Svensson, L 2018. *Handbook of Western Palearctic birds 1 – Passerines: larks to Phylloscopus warblers*. London.
- Small, B J 2009. From the Rarities Committee's files. The identification of male 'Ehrenberg's Redstart', with comments on British claims. *Br Birds* 102: 84-97.
- Svensson, L 1992. *Identification guide to European passerines*. Fourth edition. Stockholm.
- Svensson, L, Grant, P J, Mullarney, K & Zetterström, D 2015. *Collins bird guide*. Second edition (revised). London.
- Wassink, A & Ebels, E B 2005. *DB Actueel: Waarschijnlijke Oosterse Gekraagde Roodstaart op Texel*. *Dutch Birding* 27: 366-367.

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APPENDIX 1 Results of linear models of *huid* calls, including sex as covariate, as described under Methods. Significant p-values indicated with asterisk ( $p < 0.05 = *$ ,  $p < 0.01 = **$  and  $p < 0.001 = ***$ ).

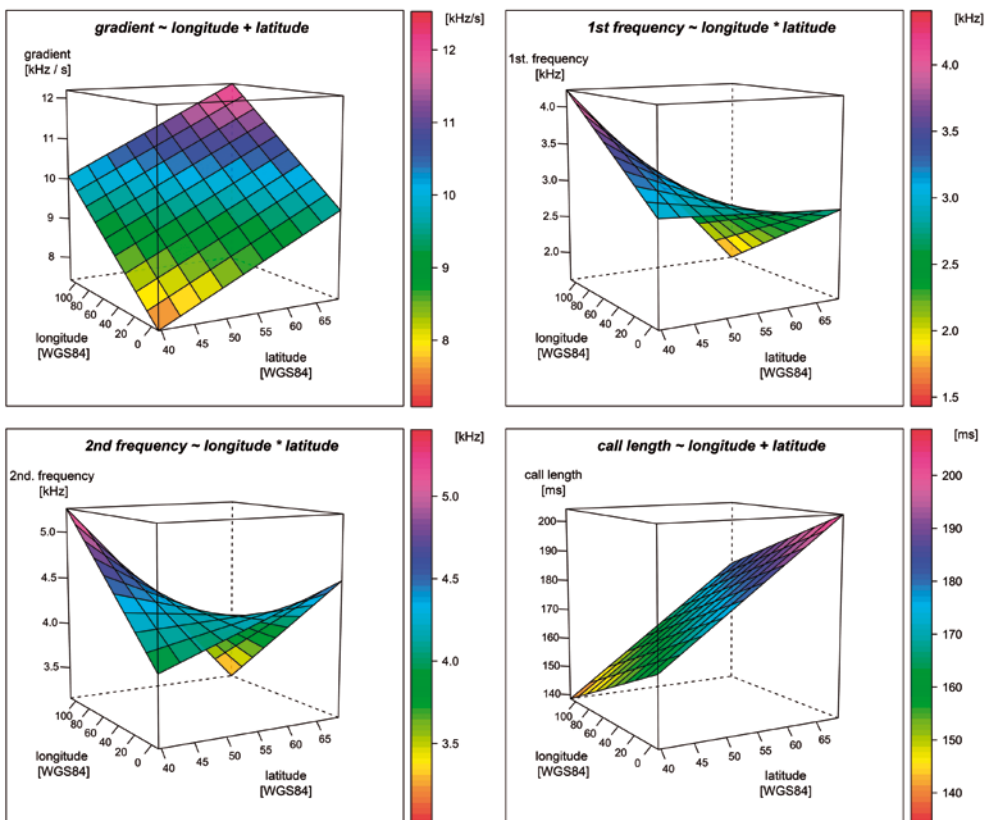
Response		estimate	standard error	t-value	p-value
<b>gradient</b>	intercept	-2.016	3.675	-0.549	0.585
	longitude	0.427	0.182	2.353	0.021*
	latitude	0.204	0.071	2.863	0.005**
	sexm	-0.405	0.416	-0.975	0.332
	interaction latitude:longitude	-0.008	0.003	-2.203	0.030*
<b>1st frequency</b>	intercept	3.190	0.321	9.919	0.000
	longitude	0.040	0.016	2.515	0.014
	latitude	-0.006	0.006	-0.962	0.338
	sexm	0.018	0.036	0.497	0.620
	interaction latitude:longitude	-0.001	0.001	-2.475	0.015*
<b>2nd frequency</b>	intercept	2.676	0.370	7.228	0.001***
	longitude	0.075	0.018	4.129	0.001***
	latitude	0.029	0.007	4.007	0.001***
	sexm	0.028	0.042	0.665	0.508
	interaction latitude:longitude	-0.001	0.001	-4.148	0.001***
<b>call length</b> (interaction longitude:latitude not significant and therefore excluded)	intercept	108.635	25.716	4.224	0.001***
	longitude	-0.211	0.141	-1.498	0.138
	longitude:latitude	1.300	0.493	2.634	0.010**
	sexm	5.678	5.998	0.947	0.346

Geographical variation in Common Redstart calls

APPENDIX 2 Results of linear models of *huid* calls, excluding sex as covariate, as described under Methods. Significant p-values indicated with asterisk ( $p < 0.05 = *$ ,  $p < 0.01 = **$  and  $p < 0.001 = ***$ ).

Response		estimate	standard error	t-value	p-value
<b>gradient</b> (interaction <i>longitude:latitude</i> not significant and therefore excluded)	intercept	4.716	1.381	3.416	0.001***
	longitude	0.023	0.006	3.856	0.001***
	latitude	0.073	0.027	2.698	0.001**
<b>1st frequency</b>	intercept	3.442	0.166	20.754	0.001***
	interaction longitude:latitude	-0.001	0.000	-6.051	0.001***
<b>2nd frequency</b>	intercept	3.254	0.223	14.571	0.001***
	interaction longitude:latitude	-0.001	0.000	-5.142	0.001***
<b>call length</b> (interaction <i>longitude:latitude</i> not significant and therefore excluded)	intercept	101.202	17.926	5.646	0.001***
	longitude	-0.194	0.079	-2.473	0.014*
	latitude	1.473	0.348	4.231	0.001***

APPENDIX 3 Gradient, 1st frequency, 2nd frequency and call length of *huid* calls in dependency of longitude and latitude. Covariate 'sex' not included in figure as it was not significant.



Geographical variation in Common Redstart calls

APPENDIX 4 Results of linear models of *heed* calls, including sex as covariate, as described under Methods. Significant p-values indicated with asterisk ( $p < 0.05 = *$ ,  $p < 0.01 = **$  and  $p < 0.001 = ***$ ).

Response		estimate	standard error	t-value	p-value
<b>gradient</b> (interaction longitude:latitude not significant and therefore excluded)	intercept	6.164	6.467	0.953	0.353
	longitude	-0.009	0.022	-0.408	0.688
	longitude:latitude	-0.059	0.156	-0.381	0.708
	sexm	-1.521	0.950	-1.601	0.126
<b>1st frequency</b>	intercept	1.092	1.337	0.817	0.424
	sexm	0.269	0.131	2.055	0.055
	interaction longitude:latitude	-0.001	0.001	-2.447	0.025*
<b>2nd frequency</b> (interaction longitude:latitude not significant and therefore excluded)	intercept	4.430	0.549	8.059	0.001***
	longitude	0.001	0.002	0.175	0.863
	longitude:latitude	-0.004	0.013	-0.298	0.769
	sexm	0.004	0.081	0.049	0.961
<b>call length</b> (interaction longitude:latitude not significant and therefore excluded)	intercept	117.834	87.780	1.342	0.197
	longitude	-0.464	0.302	-1.534	0.144
	longitude:latitude	1.892	2.136	0.886	0.388
	sexm	-12.895	12.605	-1.023	0.321

APPENDIX 5 Results of linear models of *heed* calls, excluding sex as covariate, as described under Methods. Significant p-values indicated with asterisk ( $p < 0.05 = *$ ,  $p < 0.01 = **$  and  $p < 0.001 = ***$ ).

Response		estimate	standard error	t-value	p-value
<b>gradient</b> (interaction longitude:latitude not significant and therefore excluded)	intercept	-1.718	2.196	-0.782	0.437
	longitude	-0.044	0.009	-4.744	0.001***
	longitude:latitude	0.124	0.051	2.447	0.017*
<b>1st frequency</b> (interaction longitude:latitude not significant and therefore excluded)	intercept	5.429	0.383	14.160	0.001***
	longitude	0.010	0.002	6.252	0.001***
	longitude:latitude	-0.041	0.009	-4.627	0.001***
<b>2nd frequency</b> (interaction longitude:latitude not significant and therefore excluded)	intercept	5.348	0.252	21.212	0.001***
	longitude	0.004	0.001	3.589	0.001***
	longitude:latitude	-0.027	0.006	-4.682	0.001***
<b>call length</b> (interaction longitude:latitude not significant and therefore excluded)	intercept	206.322	26.121	7.899	0.001***
	longitude	0.028	0.109	0.254	0.801
	longitude:latitude	-0.930	0.605	-1.536	0.130

## Geographical variation in Common Redstart calls

APPENDIX 6 Gradient, 1st frequency, 2nd frequency and call length of *heed* calls in dependency of longitude and latitude. Covariate 'sex' not included in figure as it was not significant.



# Lanceolated Warbler on Hornøya, Svalbard

Kees H T Schreven

On 8 August 2018, I found a dead passerine on Hornøya in the Tusenøyane islands group, in south-eastern Svalbard (77°0'29.9"N 21°51'37.2"E; figure 1). This happened during an expedition to catch Pink-footed Geese *Anser brachyrhynchus* and monitor Pale-bellied Brent Geese *Branta hrota* in Svalbard (cf Madsen et al 2019). On Hornøya, we observed in total 33 Common Eiders *Somateria mollissima*, 30 Purple Sandpipers *Calidris maritima*, 15 Red Phalaropes *Phalaropus fulicarius*, two pairs of Parasitic Jaeger *Stercorarius parasiticus*, two pairs of Great Skua *S skua*, 20 Arctic Terns *Sterna paradisaea* and one Snow Bunting *Plectrophenax nivalis*. The dead passerine was found c 20 m from the south coast of the island, c 2-3 m above sea level, on rocks with mossy vegetated patches (plate 223). The body was not fresh but hard, dry and shrivelled, and relatively intact. The bird was lying in a stretched position, with the wings against the body, head forward and legs backward. The back was strongly hunched (plate 225), which indicates that the bird had been cramped. These finding cir-

cumstances suggest that the bird was not washed ashore but had landed on the island itself and subsequently died. Presumably, the carcass had laid there already for a few years, because the colours on the upper side were faded. Decay is very slow in this region, with snow cover and below-zero temperatures during most of the year ([www.yr.no](http://www.yr.no)). Both legs were broken at the tarsus but were still complete and attached to the rest of the body. It is unclear how this had happened. Maybe a scavenger had inspected the bird, an animal had stepped on it, or ice and snow movement had broken them. Inside the body and among the feathers, dead mites and springtails were found (see below).

## Description

See plate 224-228. The plumage could not be completely evaluated because of severe fading.

SIZE & SHAPE Small passerine with relatively short wings and quite long, graduated tail. P2 (primaries numbered from outside) in folded wing only marginally shorter

FIGURE 1 Map of Svalbard, Tusenøyane islands group, and Hornøya (<https://toposvalbard.npolar.no>). Location of found bird indicated by red circle.



*Lanceolated Warbler on Hornøya, Svalbard*



**223** View on south-eastern coastline of Hornøya, Svalbard, 8 August 2018 (Kees H T Schreven) **224-225** Lanceolated Warbler / Kleine Sprinkhaanzanger *Locustella lanceolata* (found on Hornøya, Svalbard, on 8 August 2018), Bennekom, Gelderland, Netherlands, 8 January 2019 (Kees H T Schreven)

TABLE 1 Measurements of Lanceolated Warbler *Locustella lanceolata* found on Hornøya, Svalbard, on 8 August 2018. All measurements taken according to Svensson (1992). Primaries numbered from outside.

wing length	58 mm
tail length (ruler method, not folded upwards)	46 mm
tarsus (not bent)	± 18 mm
hind claw	6.0 mm
bill length (to skull)	12.6 mm
bill length (to feathering)	10.1 mm
bill depth (at proximal edge of nostril)	3.1 mm
bill width (at proximal edge of nostril)	3.1 mm
position of tip of p2 relative to tip of other primaries	between p3-4
length of notch on inner web of p2	5.9 mm
length of p1 relative to longest primary coverts	± 1 mm longer
longest primary (wing-tip)	p3
primaries with emargination on outer web	p3
distance between tips of central (longest) and outer (shortest) tail-feather	± 13 mm

than wing-tip (=p3) (table 1). Legs quite strong, nails evenly curved.

HEAD Not intact, visible parts brown but pale beige on throat and chin.

UPPERSIDE & UPPERWING Mainly beige-brown to ochre with no clear bars or stripes on wing or head. Centre of back feathers, tertials (not all visible), alula, primary coverts and greater coverts dark brown to blackish-brown.

UNDERPARTS Whitish with small blackish spots in middle or end of feathers. Undertail-coverts ochre to orange with whitish tip and dark brown centre below tip.

TAIL Beige-brown.

MEASUREMENTS See table 1.



226-228 Lanceolated Warbler / Kleine Sprinkhaanzanger *Locustella lanceolata* (found on Hornøya, Svalbard, on 8 August 2018), Bennekom, Gelderland, Netherlands, 8 January 2019 (Kees H T Schreven)

### Identification

The combination of size, structure and colour suggests a *Locustella* warbler. Measurements and wing formula (see table 1) were compared with species of *Acrocephalus*, *Locustella*, *Phylloscopus* and *Hippolais* as mentioned by Svensson (1992), and the only possible species is Lanceolated Warbler *L lanceolata*. Also the general appearance of the bird matches this species well. Kees Roselaar (pers comm) pointed out that Lanceolated can be confused with the eastern subspecies of Common Grasshopper Warbler *L naevia straminea*, which is smaller than nominate *L n naevia* and which is not mentioned in Svensson (1992). Based on wing length, notch of p2, tail length and bill length, the Hornøya bird was not a *L n straminea* (Kees Roselaar unpublished measurements).

As a confirmation, a few feathers were analysed genetically by Peter de Knijff. A short (154 bp) fragment of the mitochondrial cytochrome B gene was sequenced and the sequence was compared with those present in GenBank. This resulted in four 100% identical matches with Lanceolated Warbler individuals (GenBank accession numbers HQ608849.1, DQ119525.1, DQ119524.1, JX398904.1). The sequence data of the Hornøya bird will be stored in GenBank. The bird, remaining feather samples and DNA will be stored in the collection of Naturalis Biodiversity Center in Leiden, Zuid-Holland, Netherlands.

### Age and sex

Sexes of Lanceolated Warbler cannot be distinguished on plumage (Svensson 1992). I did not examine the gonads, because this would require

destruction of the carcass with probably little helpful result, as the organs were likely decomposed or shrivelled. Genetic sexing was attempted by Peter de Knijff but failed, presumably due to poor DNA quality or poor replication in PCR.

Lanceolated Warblers have a complex moult pattern and can be aged only in autumn (Svensson 1992). In adults in autumn, all or some (usually inner) wing-feathers are worn (except for rare cases when all primaries have been renewed in summer); the streaks on throat, breast and flanks are narrow, distinct and blackish. In first-year birds in autumn, the wing-feathers are fresh and the streaks on throat, breast and flanks (the latter only if present) are often diffuse and greyish-brown rather than blackish.

The Hornøya bird was not in active moult and the plumage on the upperside was too faded to reliably detect any moult contrast. Streaks were visible on breast and throat and were distinct and blackish, which would indicate an adult in autumn. However, it is unknown when this bird reached Svalbard and therefore the age remains unresolved.

### **Mites and springtails**

Among the feathers and in the body cavity, 154 dead mites Acari and nine dead springtails Collembola were found (falling out when the body was handled or shaken). These mites were identified by Henk Siepel and Bert Vierbergen as *Ameronothrus lineatus* (four larvae, 75 deuteronymphs and 74 adult females) and *Tectocepheus velatus* (one adult). HS identified the springtails as *Hypogastrura viatica* (five) and *Folsomia quadrioculata* (four). The mite species are not parasitic but feed on algae, cyanobacteria, fungi, nematodes and are normal species in coastal habitats (Schneider et al 2004, Søvik 2004; HS pers comm). Unfortunately, the presence of these animals cannot teach us much about how long the carcass had been on Svalbard, as both adults and juveniles may have actively approached it, to feed or to take shelter. The strong female bias is normal in oribatid mites (HS pers comm). The springtails are generally abundant at the coast (*H. viatica*) or in the soil (*F. quadrioculata*) and may have been on the carcass incidentally. All specimens have been added to the collections of HS and BV.

### **Possible origin and previous records**

Lanceolated Warbler breeds in Russia in the central Ural, east to Siberia, Kamchatka, the Kuril Islands, Hokkaido (Japan) and north-eastern China (Cramp 1992), while a few singing males are re-

corded in eastern Finland annually (Slack 2009). The species migrates through eastern and north-eastern China and winters in India, Nepal to south-eastern Asia and the Philippines (Cramp 1992, Slack 2009). One may think that a bird could end up on Svalbard during spring migration by overshooting its breeding range. This could explain the summer records in Norway and Sweden (Slack 2009; Tor Olsen pers comm). However, Slack (2009) suggests 'random post-breeding dispersal' of adults or 'full reverse migration' of first-years as the mechanism behind the records of this species in western Europe (including Scandinavia away from possible breeding grounds in Finland), because most records mentioned in Slack (2009) have occurred in autumn, as did one recent record in Iceland (Yann Kolbeinsson pers comm, see <https://ebird.org/view/checklist/S49155720>). How this bird may have reached Svalbard is unknown; by own effort or maybe ship-assisted? It is interesting to note that a previous record from 15 September 1982 in the same region concerns a bird on a vessel c 130 km north of Bjørnøya, Norway (Slack 2009). Still, this is 260 km south of the Hornøya record. Therefore, the dead Lanceolated Warbler of Hornøya may represent the northernmost record. It was accepted by the Norwegian rarities committee (NSKF) as the 20th for Norway (TO pers comm).

### **Acknowledgements**

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### **Samenvatting**

KLEINE SPRINKHAANZANGER OP HORNØYA, SPITSBERGEN Op 8 augustus 2018 werd een dode zangvogel gevonden op Hornøya, in de eilandengroep Tusenøyanen, Zuidoost-Spitsbergen. Het karkas met veren was leeg, stijf en verbleekt, relatief intact, maar met gebroken poten. De lichaamshouding (bolle rug) wees op verkramping. De combinatie van kleur, vorm, maten en vleugelformule wezen uit dat het een Kleine Sprinkhaanzanger *Locustella lanceolata* betrof. Deze identificatie werd genetisch bevestigd. Leef tijd en geslacht bleven onbekend. Deze



vondst is mogelijk het noordelijkste geval van deze soort.

Op en in het lichaam van de vogel werden dode mijten en springstaarten aangetroffen. De mijten werden gedetermineerd als *Ameronothrus lineatus* (vier larven, 75 deuteronymfen en 74 adulte vrouwtjes) en *Tectocephus velatus* (één adult), de springstaarten als *Hypogastrura viatica* (vijf) en *Folsomia quadrioculata* (vier). Deze soorten zijn algemeen in kuststreken en niet parasitair.

## References

Cramp, S (editor) 1992. The birds of the Western Palearctic 6. Oxford.  
Madsen, J, Jaspers, C, Frikke, J, Gundersen, O M, Nolet,

B A, Nolet, K, Schreven, K H T, Sonne, C & de Vries, P P 2019. A gloomy future for light-bellied brent geese in Tusenøyaane, Svalbard, under a changing predator regime. *Polar Res* 38: 3393.  
Schneider, K, Renker, C, Scheu, S & Maraun, M 2004. Feeding biology of oribatid mites: a mini-review. *Phytophaga* 14: 247-256.  
Slack, R 2009. Rare birds where and when. An analysis of status & distribution in Britain and Ireland. 1: sandgrouse to New World orioles. York.  
Søvik, G 2004. The biology and life history of arctic populations of the littoral mite *Ameronothrus lineatus* (Acari, Oribatida). *Exp Appl Acarol* 34: 3-20.  
Svensson, L 1992. Identification guide to European passerines. Fourth edition. Stockholm.

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## Black-capped Petrel kleptoparasitising Red-billed Tropicbirds off Raso, Cape Verde Islands, in February 2020

Lifting anchor off Raso, Cape Verde Islands, on 6 February 2020, and having watched the endemic Raso Larks *Alauda razae* from onboard, we sailed up the east coast. I asked the skipper to keep parallel and close to the coast so I could check the active Brown Booby *Sula leucogaster* colony again, where we had seen an adult Red-footed Booby *S sula* earlier. After photographing several Red-billed Tropicbirds *Phaethon aethereus*, which were displaying and flying into nest sites, and seeing the Red-footed Booby again (cf Dutch Birding 42: 126, plate 163, 2020), I scanned ahead of the boat with binoculars and caught sight of a distant seabird shearing away from the boat. I continued following it, at which point it started flying higher and higher, until it was c 50 m above the sea surface with horizontal wings, and then banked across our path. The flight height and style and the massive white rump had me reaching for my camera. I could not believe my eyes as I zoomed my LCD screen in to see a white-faced Black-capped Petrel *Pterodroma hasitata* (cf Dutch Birding 42: 127, plate 167, 2020)! The species is extremely rare in the Western Palearctic (WP) with only 12 records, of which three in the Azores (in 2007, 2009 and 2011), two in Britain (in 1850 and 1984), four in the Cape Verde Islands (in 2016, 2017, 2018 and 2019), and one each in Madeira (in 2010), Morocco (in 2013) and Spain (in 2002) (Flood & Williams 2018, Ławicki & van den Berg

2019). The timing of the Cape Verde records (6 February, 6 February, 13 February, 11 March and 27 April) and the fact that two individuals have been caught inland in suitable breeding habitat on Santa Antão suggest that a small breeding population exists in the WP awaiting discovery.

For the next 17 minutes, I watched in amazement as the bird flew closer to the boat. It was kleptoparasitising the Red-billed Tropicbirds and forcing them to regurgitate (plate 229-231), just like a Great Skua *Stercorarius skua* would do in a Northern Gannet *Morus bassanus* colony in Scotland. Earlier that afternoon (c 14:00), there had been very few Red-billed but at c 17:00 a large number of c 50+ were flying into the cliffs from surrounding areas and it was these the petrel was targeting. It would fly a distance offshore looking out for a suitable victim, tracking it before closing in and chasing it at close quarters. During some pursuits it was flying over the land behind the cliffs in pursuit! At no point did the petrel target the tropicbird itself, it just used its presence at close quarters to force it to drop its food. At least twice the petrel was successful and landed on the sea to eat what had been dropped. Flying at height above the sea surface has been documented for the species before, with gull-like soaring on horizontal wings from 50 to 100 m above the ocean surface being observed very rarely during moderate wind conditions (Harrison 1985, Simons et al 2013). The conditions during this observation was a wind of 6-7 Bft with 4 m swell.

There have been no documented reports of kleptoparasitism in Black-capped Petrels in the literature (Simons et al 2013). However, research



**229** Black-capped Petrel / Zwartkapstormvogel *Pterodroma hasitata*, flying at c 50 m above water surface in pursuit of Red-billed Tropicbird / Roodsnavelkeerringvogel *Phaethon aethereus*, off Raso, Cape Verde Islands, 6 February 2020 (*Peter Stronach*)  
**230** Black-capped Petrel / Zwartkapstormvogel *Pterodroma hasitata*, flying close to cliffs in pursuit of Red-billed Tropicbird / Roodsnavelkeerringvogel *Phaethon aethereus*, off Raso, Cape Verde Islands, 6 February 2020 (*Peter Stronach*) **231** Black-capped Petrel / Zwartkapstormvogel *Pterodroma hasitata*, closing in on Red-billed Tropicbird / Roodsnavelkeerringvogel *Phaethon aethereus*, off Raso, Cape Verde Islands, 6 February 2020 (*Peter Stronach*). Petrel's bill was open but no vocalisation heard. **232** Black-capped Petrel / Zwartkapstormvogel *Pterodroma hasitata* at chum slick, chasing Audubon's Shearwater / Audubons Pijlstormvogel *Puffinus lherminieri* with food, off Cape Hatteras, North Carolina, USA, 7 August 2015 (*Peter Flood*)

for this note uncovered several similar types of behaviour which have not been documented to date and are covered below. Black-capped have been observed attempting to steal pieces of chum off each other during pelagic chumming events (Haney 1987). The pelagics that run off Cape Hatteras, North Carolina, USA, have provided the most observations of 'at sea' behaviour of the species. A Black-capped was observed from this pelagic on 17 July 2011 in a flight 'duel' with a White-tailed Tropicbird *P lepturus*, taking turns to force each other into the water (Hoffmann 2011). This has also been observed many times during subsequent pelagics but this was described as mobbing behaviour rather than kleptoparasitism, with no food involved or changing hands. Also on 7 August 2015, a Black-capped was observed chasing an Audubon's Shearwater *Puffinus lherminieri* with food (plate 232) at a chum slick set for pelagic birds. There was also a single observa-

tion of a Black-capped trying to take food from a Fea's Petrel *P feae* (Kate Sutherland pers comm). Whether the observed behaviour was opportunistic or is more regular remains to be seen.

## References

- Flood, R L & Williams, A C 2018. Black-capped Petrel off Agadir, Morocco, in March 2013. Dutch Birding 40: 92-95.
- Haney, J C 1987. Aspects of the pelagic ecology and behavior of the Black-capped Petrel (*Pterodroma hasitata*). Wilson Bull 99: 153-168.
- Harrison, P 1985. Seabirds: an identification guide. Second edition. London.
- Hoffmann, R 2011. Website: <https://ebird.org/view/checklist/S42559737>.
- Ławicki, Ł & van den Berg, A B 2019. WP reports: April to late May 2019. Dutch Birding 41: 186-203.
- Simons, T R, Lee, D S & Haney, J C 2013. Diablotin *Pterodroma hasitata*: a biography of the endangered Black-capped Petrel. Mar Ornithol 41 (special issue): 2-43.

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## Cape Gannet between Flores and Corvo, Azores, in April 2016

On 14 April 2016, a cold day with a cloudy sky and northern winds with a few hail showers and temperatures reaching a minimum of 7°C, skipper Carlos Mendes left Flores, Azores, for a tourist trip to Corvo. Almost midway in the channel between the two islands, he saw a white bird resting on the sea which was larger than usually seen species. He had some time to prepare his camera and to slowly approach the bird with his zodiac. CM identified it as a gannet *Morus* and assumed it was a bird making a last winter stop before going back north. It flew off quickly and disappeared and the foreign tourists on the boat did not pay any attention to it. The next day at c 17:00, CM posted a photograph of the gannet on Facebook. At that moment and c 3000 km away, Vincent Legrand was looking on his Facebook app when he was stopped by CM's photograph and realised that it showed a Cape Gannet *M capensis*! VL spread the information and checked the literature and internet for the possibility of the bird being an aberrant subadult Northern Gannet *M bassanus*, a now well-known pitfall (see below). He posted the sighting on the Facebook pages 'Global Bird Alert' and 'Azores Bird Sightings' and received confirmation of the identification by many birders.

## Description

The description is based on photographs by CM (plate 233-234; Dutch Birding 38: 244, plate 367, 2016).

**SIZE & SHAPE** Typical gannet, with large size, long pointed tail, long and slender pointed wing and strong dagger-like bill.

**PLUMAGE** Largely white, with strong yellowish to yellow-brownish colour on head and neck. Secondaries, primaries and primary coverts black. Tertiaries white. Some central underwing primary coverts black. Uppertail and undertail black. Black line above bill, reaching over eye and extending around gape, extending as short moustachial stripe. Black gular stripe long, reaching as far as yellowish-brownish wash on head and c three times longer than moustachial stripe.

**BARE PARTS** Bill pale bluish. Eye pale bluish. Leg dark brownish or blackish.

## Identification

The genus *Morus* has three species, easily recognized in adult plumage by their large size, largely white plumage with black primaries and primary coverts or both secondaries and primaries (and primary coverts), strong and pointed bill and yellowish wash on the head. Northern Gannet occurs on both sides of the northern Atlantic Ocean and the other two occur in the Southern Hemisphere: Cape Gannet in southern Africa and

Cape Gannet between Flores and Corvo, Azores, in April 2016



233-234 Cape Gannet / Kaapse Jan-van-gent *Morus capensis*, between Flores and Corvo, Azores, 14 April 2016  
(Carlos Mendes)



Australasian Gannet *M serrator* in the southern Pacific Ocean. The latter two share the black secondaries and primaries (only primaries black in adult Northern, creating 'ink-dipped' wing-tip) and are very difficult to separate; the best way to differentiate them is the length of the black gular stripe. The flight photograph by CM clearly shows a gannet, with a completely white body combined with a black uppertail, black primaries and black secondaries. Some near-adult Northern can be close in appearance with a very similar wing pattern, due to the secondaries still being largely dark, but the head pattern is diagnostic, especially the long black gular stripe, which is c two times longer in Cape than in Northern and Australasian. In the Azores bird, some underwing primary coverts were black, indicating that the bird had not entirely reached the adult plumage. Masked Booby *Sula leucogaster* has a similar black-and-white wing pattern as Cape but has a pale yellow bill, yellow eye and more extensive black face mask, and lacks the yellowish wash on head and neck. For identification of gannets and boobies and possible pitfalls, see, eg, Broekhuysen & Liversidge (1954), Nelson (1978), Harrison (1985), Mackrill (1988), Sibson (1988) and Garner (2007).

#### *Distribution and vagrancy*

Cape Gannet is the only species of the genus *Morus* listed as 'Endangered' (BirdLife International 2019). It is endemic to southern Africa, largely confined to the continental shelf and breeding in dense colonies off the Cape, South Africa, and Namibia. A tiny population breeds on St Paul (French territory) in the Indian Ocean, about halfway between South Africa and Australia. In the austral winter (northern summer), large numbers follow sardines shoals up the east coast of South Africa and others migrate up the west coast to the Gulf of Guinea (Crawford et al 1983). For distribution, dispersal and vagrancy records of Cape and Australasian Gannet, see, eg, Cameron (1981), Venn (1982), Cassidy (1983), Harrison (1985), Marchant & Higgins (1990), Klages (1994), Bergkamp (1995), Ramirez (1996), Robertson & Stephenson (2005), Oschadleus & Brooks (2006), Garner (2007), Jordaan & McIntyre (2016) and Sherley et al (2019). Cape has even reached the Pacific Ocean (García-Godos 2002).

The Cape Gannet in the channel between Corvo and Flores in April 2016 was accepted by the Portuguese rarities committee (Pedro Ramalho in litt) and is the first for the WP 'sensu BWP' and the second for the 'greater WP', after the one

photographed on Shinayz island, Al Hallaniyat archipelago, Oman, on 14 March 2004 (Eriksen 2004).

In 2000, the Spanish rarities committee removed the only previous record for Spain and the WP (in December 1985; de Juana & Comité de Rarezas de la SEO 1987, 1988) from the national list; this bird is now accepted as 'Cape/Australasian Gannet'. Based on Crochet & Haas (2008), other WP claims/records were dismissed and the species was removed from the WP list 'sensu BWP' (cf Mackrill 1986, Gantlett 1988, Harrison 1988, Paterson & Riddiford 1990).

#### References

- Bergkamp, P Y 1995. First record of Cape Gannet *Sula capensis* for Argentina. Bull Br Ornithol Club 115: 71.
- BirdLife International 2019. Cape Gannet *Morus capensis*. Website: <https://tinyurl.com/yydyk8ge>. [Accessed 10 May 2019.]
- Broekhuysen, G J & Liversidge, R 1954. Colour variation in the tail feathers of South African Gannet. Ostrich 25: 19-22.
- Cameron, M 1981. Cape Gannet photographed at Wedge Light, Port Phillip Bay. Geelong Nat 18: 34-35.
- Cassidy, R J 1983. The Australian Gannet in African waters. Ostrich 54: 182.
- Crawford, R J M, Shelton, P A, Cooper, J & Brooke, R K 1983. Distribution, population size and conservation of the Cape Gannet *Morus capensis*. S Afr J Mar Sci 1: 153-174.
- Crochet, P-A & Haas, M 2008. Western Palearctic list update: deletion of Cape Gannet. Dutch Birding 30: 103-104.
- Eriksen, H 2004. The first Cape Gannet *Sula capensis* in Oman and the Middle East. Sandgrouse 26: 146-148.
- Gantlett, S J M 1988. Cape Gannets in Britain? Birding World 1: 349.
- García-Godos, I 2002. The first record of the Cape Gannet *Morus capensis* for Peru and the Pacific Ocean. Mar Ornithol 30: 50.
- Garner, M 2007. Focus on: identification of Cape Gannet. Website: <https://tinyurl.com/y5owv3fp>.
- Harrison, P 1985. Seabirds: an identification guide. Second edition. London.
- Harrison, P 1988. Seabirding aboard the Chalice in 1988. Birding World 1: 345-348.
- Jordaan, R K & McIntyre, T 2016. Long-distance dispersal of a Cape Gannet *Morus capensis* after an extended period of nest-site fidelity. Mar Ornithol 44: 1-2.
- de Juana, E & Comité de Rarezas de la SEO 1987, 1988. Observaciones homologadas de aves raras en España. Informe de 1985; de 1986. Ardeola 34: 123-133; 35: 167-174.
- Klages, N T W 1994. Dispersal and site fidelity of Cape Gannets *Morus capensis*. Ostrich 65: 218-224.
- Mackrill, E J 1986. A 'southern' gannet in the Mediterranean. Cormorant 13: 162-164.
- Mackrill, E J 1988. Plumages of Gannets. Br Birds 81: 683.

- Marchant, S & Higgins, P J (editors) 1990. Handbook of Australian, New Zealand and Antarctic birds 1. Melbourne.
- Nelson, J B 1978. The Sulidae: gannets and boobies. Oxford.
- Oschadleus, H D & Brooks, M 2006. Cape Gannet *Morus capensis* movements in Africa. In: Boere, G C, Galbraith, C A & Stroud, D A (editors), Waterbirds around the world, Edinburgh, p 777-778.
- Paterson, A M & Riddiford, N J 1990. Does the Cape Gannet enter European waters? Br Birds 83: 519-526.
- Ramirez, L P 1996. *Sula capensis* in the Beagle Channel. Hornero 14: 67-68.
- Robertson, C J R & Stephenson, B M 2005. Cape Gannet (*Sula capensis*) breeding at Cape Kidnappers, New Zealand. Notornis 52: 238-242.
- Sherley, R B, Crawford, R J M, Dyer, B M, Kemper, J, Makhado, A B, Masotla, M, Pichegru, L, Pistorius, P A, Roux, J-P, Ryan, P G, Tom, D, Upfold, L & Winker, H 2019. The status and conservation of the Cape Gannet *Morus capensis*. Ostrich 90: 335-346.
- Sibson, R B 1988. A black-tailed Australasian Gannet and others with variable tails at Muriwai. Notornis 35: 261-264.
- Venn, D R 1982. The Cape Gannet *Sula capensis*, a new record for Australia. Victorian Nat 99: 56-58.

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## Greater Sand Plover breeding at Port Said, Egypt, in June 2019

Greater Sand Plover *Anarhynchus leschenaultii* is a fairly common passage and winter visitor (July to May) in Egypt, mainly east of Alexandria along the Mediterranean coast, in the Suez Canal area, in Wadi El Natrun, along the Red Sea coast and in northern Sinai (Goodman & Meininger 1989). The western subspecies *A l columbinus* (Anatolian Sand Plover) breeds in Armenia, Azerbaijan, Jordan, Syria and Turkey (Chandler 2009, Wiersma et al 2020). Although without positive documentation, this subspecies is also suspected to breed occasionally in Egypt (Goodman & Meininger 1989). Breeding occurs in lowland deserts and dry sparsely vegetated semi-desert areas. The nest consists of a shallow scrape with small amounts of vegetation and is probably made by both sexes. In Turkey, eggs are laid from the last week of March and mainly in the first half of April. The incubation period of the two to four eggs is not precisely known but is at least 24 days and incubating is done by both sexes (Cramp & Simmons 1983).

### Discovery of breeding in Egypt

On 27 July 2014, I visited a sandy area which perfectly matches the description of breeding habitat of Greater Sand Plover. The area is situated close to the Mediterranean coast, south-east of Port Said, Port Said Governorate, in north-eastern Egypt, just east of the northern end of the Suez Canal (31°10'N, 32°24'E). During this visit, I en-

countered a fresh juvenile Greater Sand (plate 235). Its plumage was rather unusual for me because it was rather early for this species to arrive in this plumage for wintering or migration. I wondered if this could be offspring of a nearby breeding pair. On 7 September 2015, I visited this area again and observed another fresh juvenile (plate 236). In 2019, I revisited the area much earlier in the season. On 30 June 2019, I observed a chick of a few days old characterized by its large bill and very long legs (plate 237 and 239), with a nearby female hidden behind a large stone (plate 238-239). This represents the first documented breeding record of Greater Sand in Egypt.

### Status and conservation

Although there is no immediate threat to the newly discovered breeding site of Greater Sand Plover, the whole coastal area of the Port Said Governorate is vulnerable to shoreline development. With hotel complexes and new port and industrial activities in the immediate vicinity, this site requires further conservation measures. Additionally, further study is necessary to elucidate the breeding ecology and breeding numbers of Greater Sand along this part of the Mediterranean coast.

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### References

Chandler, R 2009. Shorebirds of the Northern Hemisphere. London.

Greater Sand Plover breeding at Port Said, Egypt, in June 2019



**235** Greater Sand Plover / Woestijnplevier *Anarhynchus leschenaultii*, juvenile, Port Said, Port Said Governorate, Egypt, 27 July 2014 (*Mohamed I Habib*) **236** Greater Sand Plover / Woestijnplevier *Anarhynchus leschenaultii*, juvenile, Port Said, Port Said Governorate, Egypt, 7 September 2015 (*Mohamed I Habib*) **237** Greater Sand Plover / Woestijnplevier *Anarhynchus leschenaultii*, chick, Port Said, Port Said Governorate, Egypt, 30 June 2019 (*Mohamed I Habib*) **238** Greater Sand Plover / Woestijnplevier *Anarhynchus leschenaultii*, adult female, Port Said, Port Said Governorate, Egypt, 30 June 2019 (*Mohamed I Habib*) **239** Greater Sand Plovers / Woestijnplevier *Anarhynchus leschenaultii*, adult female with chick, Port Said, Port Said Governorate, Egypt, 30 June 2019 (*Mohamed I Habib*)

Cramp, S & Simmons, K E L (editors) 1983. The birds of the Western Palearctic 3. Oxford.  
Goodman, S M & Meininger, P L (editors) 1989. The birds of Egypt. Oxford.  
Wiersma, P, Kirwan, G M & Boesman, P F D 2020.

Greater Sand-Plover *Charadrius leschenaultii*. In: del Hoyo, J, Elliott, A, Sargatal, J, Christie, D A & de Juana, E (editors), Birds of the world, Ithaca. Website: <https://doi.org/10.2173/bow.grsplo.01>.

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## Spur-winged Lapwing at Djamaa, Algeria, in June 2011

The Oued Righ wetlands in the north-eastern part of Algeria are regularly visited by local birders and ornithologists to monitor and count birds. In the early morning of 16 June 2011, we observed an adult Spur-winged Lapwing *Vanellus spinosus* here and managed to take several photographs. Our observation was at Ayata lake near Djamaa (33°29'32.44"N, 5°59'31.55"E), Ouargla province. Being an unmistakable bird, the identification was straightforward. It was a medium-sized, long-legged wader with black chest and belly, crown, tail-band and foreneck stripe. The upperparts appeared uniform pale brown. The bill and legs were black and the side of neck, cheek and lower belly were white. The bird was present for only one day.

### *Distribution and status*

Spur-winged Lapwing occurs in warm dry latitudes in Mediterranean, subtropical and tropical zones. Its main distribution range lies across Sub-Saharan Africa, especially in Ethiopia, Kenya, Senegal and Uganda (del Hoyo et al 1996, Snow & Perrins 1998). In addition, it also breeds in Egypt, especially in the Nile valley and Nile delta (Goodman & Meininger 1989) but probably also in the oases in the Western Desert, where several birds were seen in March 2009 (Enno Ebels in litt). The species is furthermore present in south-eastern Europe and the Middle East (Wiersma & Kirwan 2020), including Yemen (Jennings 2010), Oman (Eriksen & Victor 2013), Kuwait (Gregory 2005) and Saudi Arabia (Jennings 1981, Porter et al 1996). The largest population in the Middle East is found in Turkey (Burfield & van Bommel 2004). The species is common in various Turkish regions as a migrant and breeding bird (Erdoğan et al 2010, Özkan et al 2012). In Iran, since 2000, the species occurs with increasing frequency in Khuzestan, where it now is a resident breeding bird, and extending its range, with confirmed breeding in West and East Azerbaijan provinces since 2014 (Ayé & Salmanzadeh 2007, Khaleghizadeh et al 2017). In Arme-

nia, it has become a year-round visitor in recent years (Aghababayan 2019).

The population of Spur-winged Lapwing is relatively small in south-eastern Europe (Cyprus, Greece and western Turkey), the Middle East and Egypt. Breeding numbers are estimated between 25 000 and 100 000 individuals (Stattersfield & Capper 2000, Boere & Stroud 2006). The population has increased considerably in Egypt since the 1960s. On the other hand, in Greece, numbers have decreased 25-30% between 1970 and 1993 (Tucker & Heath 1994, Handrinos & Akriotis 1997). However, recent figures from that region show an increase again (Charalambidou et al 2012).

The species occurs in a wide variety of habitats, such as mudflats, sandy shores, beaches and dunes, as well as in man-made habitats like cultivated fields and meadows near water, rice paddies and flooded fields (del Hoyo et al 1996, Ciach 2011).

As a vagrant in the WP, the species has been recorded in many countries, eg, Bahrain, Bulgaria, Cape Verde Islands (an overseas flight of at least 600 km from nearby Senegal), Croatia, Czechia, France, Georgia, Germany, Hungary, Italy, Malta, Montenegro, the Netherlands, Qatar, Poland, Romania, Serbia, United Arab Emirates and Ukraine, but some of these records have been

**240** Spur-winged Lapwing / Sporenkievit *Vanellus spinosus*, adult, Djamaa, Ouargla province, Algeria, 16 June 2011 (Yassine Farhi)





placed in category D or/and E, especially a few in western Europe (Mitchell 2017; www.tarsiger.com). There is one record from Libya, at Kufrah in the south-east on 4 January 2011 (Hering 2012, Isenmann et al 2016). There are no records for Morocco or Tunisia. The vagrancy potential of the species is illustrated by the first record for the Seychelles from November 2010 to April 2011 (trapped and ringed), at least 1300 km from the nearest coast where the species breeds in Somalia (www.africanbirdclub.org/countries/Seychelles/news).

This was the first record for Algeria; the species is not mentioned by Isenmann & Moali (2000). It is also the first record for north-western Africa and relatively far from breeding areas in south-eastern Europe, the Middle East and Sub-Saharan Africa. The bird may have originated from the south (Sahel region), which is nearer to most of Algeria than Greece, Turkey or Egypt. The distance to the nearest populations in the Western Desert in Egypt is c 2000 km, to the northern limits of the distribution in Mali and Niger c 1800 km and to the closest breeding sites in Greece also c 1800 km. A vagrancy occurrence is not unexpected because of the species' overall increasing trend and dispersive behaviour.

## References

- Aghababyan, K 2019. Summer observations of Lesser White-fronted Goose *Anser erythropus* and Spur-winged Lapwing *Vanellus spinosus* in Armenia. *Sandgrouse* 41: 2-4.
- Ayé, R & Salmanzadeh, R 2007. The status of Spur-winged Lapwing *Vanellus spinosus* in Iran with first evidence of breeding. *Podoces* 2: 151-153.
- Boere, G C & Stroud, D A 2006. The flyway concept: what it is and what it isn't. In: Boere, G C, Galbraith, C A & Stroud, D A (editors), *Waterbirds around the world. A global overview of the conservation, management and research of the world's waterbird flyways*, Edinburgh, p 40-47.
- Burfield, J & van Bommel, F 2004. *Birds in Europe. Population estimates, trends and conservation status*. Cambridge.
- Charalambidou, I, Kassinis, N, Güçel, S & Fuller, W 2012. The status and breeding population of the Spur-winged Lapwing *Vanellus spinosus* in Cyprus. *Podoces* 7: 1-8.
- Ciach, M 2011. Habitat-related differences in egg size in the Spur-winged Lapwing *Vanellus spinosus*. *Ardeola* 58: 335-342.
- Erdoğan, A, Karaardıç, H & Özkan, L 2010. [Final report of determination of migration movements of migratory bird species by applying bird ringing.] Antalya. [In Turkish.]
- Eriksen, J & Victor, R 2013. *Oman bird list: the official list of the birds of the Sultanate of Oman*. Seventh edition. Muscat.
- Goodman, S M & Meininger, P L (editors) 1989. *The birds of Egypt*. Oxford.
- Gregory, G 2005. *The birds of the State of Kuwait*. Skegness.
- Handrinos, G & Akriotis, T 1997. *The birds of Greece*. London.
- Hering, J 2012. First record of Spur-winged Lapwing *Vanellus spinosus* in Libya. *Bull Afr Bird Club* 19: 71-72.
- del Hoyo, J, Elliott, A & Sargatal, J (editors) 1996. *Handbook of the birds of the world 3*. Barcelona.
- Isenmann, P, Hering, J, Brehme, S, Essghaier, M, Etayeb, K, Bourass, E & Azafzaf, H 2016. *Oiseaux de Libye / Birds of Libya*. Paris.
- Isenmann, P & Moali, A 2000. *Oiseaux d'Algérie / Birds of Algeria*. Paris.
- Jennings, M C 1981. *The birds of Saudi Arabia: a checklist*. Cambridge.
- Jennings, M C 2010. *Atlas of the breeding birds of Arabia. Fauna of Arabia 25*. Riyadh.
- Khaleghizadeh, A, Roselaar, K, Scott, D A, Tohidifar, M, Mlikovský, J, Blair, M & Kvartalnov, P 2017. *Birds of Iran: annotated checklist of the species and subspecies*. Tehran.
- Mitchell, D 2017. *Birds of Europe, North Africa and the Middle East: an annotated checklist*. Barcelona.
- Özkan, L, Karaardıç, H & Erdoğan, A 2012. Breeding biology of Spur-winged Lapwing (*Vanellus spinosus* L.) at Boğazkent, Antalya/Turkey 2009-2011. *Fresenius Environm Bull* 21: 3440-3442.
- Porter, R F, Christensen, S & Schiermacker-Hansen, P 1996. *Field guide to the birds of the Middle East*. London.
- Snow, D W & Perrins, C M (editors) 1998. *The birds of the Western Palearctic. Concise edition*. Oxford.
- Stattersfield, A J & Capper, D R (editors) 2000. *Threatened birds of the world*. Cambridge.
- Tucker, G M & Heath, M F (editors) 1994. *Birds in Europe: their conservation status*. Cambridge.
- Wiersma, P & Kirwan, G K 2020. Spur-winged Lapwing *Vanellus spinosus*. In: del Hoyo, J, Elliott, A, Sargatal, J, Christie, D A & de Juana, E (editors), *Birds of the world*, Ithaca. Website: <https://doi.org/10.2173/bow.spwlap1.01>.
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## Audouins Meeuw bij 's-Hertogenbosch in april 2019

Vanwege een extra vrije dag in de aanloop naar Goede Vrijdag ging ik een dag eerder dan gewoonlijk, op woensdagavond 17 april 2019, naar mijn ouderlijk huis in 's-Hertogenbosch, Noord-Brabant, zodat ik donderdagochtend 18 april tijd had om te trekken in het Kanaalpark bij Empel aan de oostkant van de stad. De voorspellingen waren prima; er was de hele week bijvoorbeeld al sterke trek van Beflijsters *Turdus torquatus* en mijn hoop was om er een paar mee te pikken. Er vlogen inderdaad Beflijsters langs (in totaal acht) maar behalve Graspiepers *Anthus pratensis* was het verder vrij rustig. Rond 07:35 kwamen er vanuit westelijke richting twee grotere meeuwen aanvliegen, die ik relatief laat oppikte. Met de kijker bleek de eerste meeuw een Zilvermeeuw *Larus argentatus* of aanverwante soort. De andere was een stuk interessanter: meteen viel de rode snavel op en hij leek veel zwart op de vleugel te hebben. De snavelkleur in combinatie met het formaat deden de alarmbellen rinkelen en ik pakte snel mijn camera. Inmiddels waren de vogels al over me heen gevlogen naar het oosten, waardoor ze tegen het licht in vlogen. Ik maakte zoveel mogelijk foto's en hij raakte uit beeld; de waarneming had hooguit een minuut geduurd. Ik checkte de foto's: de snavel was daarop moeilijk te beoordelen maar het vele zwart op de bovenvleugel viel op. Ik maakte een paar 'back-of-camera'-foto's en stuurde deze naar Hugo Wieleman; HW en leden van de lokale appgroep en andere vrienden vonden het lastig om de vogel te beoordelen. Na thuiskomst bekeek ik de foto's op de computer en na opnieuw overleg met anderen was er echter geen twijfel meer: er was een Audouins Meeuw *L. audouinii* over de telpost gevlogen! De waarneming werd doorgegeven en zelf heb ik later die dag nog omliggende plassen gecheckt maar zonder succes.

### Determinatie en leeftijdsbepaling

Op de foto's zijn de volgende kenmerken te zien die in combinatie alleen passen op een bijna adulte Audouins Meeuw: **1** middelgrote meeuw met lange en slanke vleugels; **2** bijna geheel lichtgrijs verenkleed (onderdelen, bovendelen en bovenvleugel) met lichtere staart en witachtige kop; **3** vrij lange, stevige en iets gebogen rode snavel; **4** buitenste handpennen geheel zwart zonder (op foto's zichtbare) witte spiegel of top, en binnenste handpennen met zwarte vlek nabij top; en **5** ontbreken van brede witte achterrand aan de vleugel. Bepaalde details zoals oogkleur, aanwezigheid

van een donkere snavelband, ondervleugel en pootkleur zijn op de foto's niet zichtbaar maar zijn niet cruciaal voor een zekere determinatie.

De zwarte tekening op de buitenste handpennedekveren en de aanwezigheid van wat smalle donkere tekening op de achterrand van de armpennen geven aan dat de vogel nog niet geheel adult was maar een tweede zomerkleed (derde kalenderjaar). In adult kleed tonen de handpennen een duidelijke witte top; door sleet kunnen deze toppen in de loop van het voorjaar (vrijwel) geheel verdwijnen en dan wordt de gehele vleugelpunt zwart. Het ontbreken van wat donkere tekening rond het oog (voor zover vast te stellen op de foto's) duidt op een vogel in (overgang naar) zomerkleed. Het grijs op de onderzijde is een variabel kenmerk en vogels kunnen zowel grijze als meer witte onderdelen tonen (cf King & Shirihai 1996, Barthel 1997, Olsen & Larsson 2004, van Duivendijk 2011, Olsen 2018; [www.gull-research.org](http://www.gull-research.org); Peter Adriaens in litt). De enige andere meeuw met grijze onderdelen en een witte kop is Heermanns Meeuw *L. heermanni* van de westkust van Noord-Amerika en Midden-Amerika maar deze soort is veel donkerder grijs op de bovendelen; bovendien is die soort nooit in Europa vastgesteld en een zeer onwaarschijnlijke dwaalgast (Olsen & Larsson 2004).

### Verspreiding en voorkomen

Audouins Meeuw broedt in het Mediterrane gebied, met name op eilanden in de westelijke Middellandse Zee en langs de Spaanse oostkust, en tegenwoordig ook in Kroatië en Portugal (Algarve) en in het oostelijke Middellandse Zeegebied tot Cyprus. In 1998 werd de wereldpopulatie geschat op c 17 000 paren in ruim 30 kolonies, en in 2008 op ruim 21 000 paren. Meer recente schattingen kwamen uit op 21 300-22 300 paar, waarvan het overgrote deel (21 080-21 310 paar) in Europa (BirdLife International 2019, Burger et al 2020). De huidige wereldpopulatie wordt geschat op c 64 000-69 000 individuen. De soort was decennia geleden sterk bedreigd en een mondiale zeldzaamheid; in 1975 bereikte de wereldpopulatie een dieptepunt met slechts c 1000 paren. Dankzij beschermingsmaatregelen en meer beschikbaar voedsel (met name visafval) groeide de populatie daarna gestaag en de soort staat sinds 2015 niet meer als bedreigd of kwetsbaar te boek. De populatie in Spanje vertegenwoordigt c 90% van de wereldpopulatie en meer dan 90% van de huidige wereldpopulatie broedt op slechts vier locaties. Eén Spaanse locatie (Ebrodelta, Catalunya) was in 2007 goed voor twee derde van de wereldpopulatie; de soort vestigde zich hier in 1981 met



**241-244** Audouins Meeuw / Audouin's Gull *Larus audouinii*, derde-kalenderjaar, Kanaalpark, 's-Hertogenbosch, Noord-Brabant, 18 april 2019 (*Rens Keijzers*)

36 broedparen. De populatie in Catalunya daalde de afgelopen jaren sterk in omvang, van 10 000-16 000 paar in 2000-11 tot minder dan 4000 in 2015-18 maar in dezelfde periode ontstonden wel nieuwe kolonies op andere locaties (Gutiérrez & Guinart 2008, BirdLife International 2019, Burger et al 2020).

Buiten het broedseizoen vindt dispersie plaats en overwinteraars worden aangetroffen langs de Noordwest-Afrikaanse kust, zuidelijk tot Gabon, Gambia en Senegal. Als dwaalgast of onregelmatige gast is de soort van west naar oost vastgesteld op de Azoren, Madeira en de Canarische Eilanden, in Frankrijk buiten de Middellandse Zeekust en in Zwitserland, Oostenrijk, Tsjechië, Slovenië, Hongarije, Bulgarije, Noord-Macedonië, Montenegro, zuidoostelijke Mediterrane landen (Egypte, Israël, Jordanië) en Georgië (cf Olsen & Larsson 2004, Wolf 2004).

Verder noordelijk is de soort een stuk zeldzamer maar is wel steeds vaker te zien als dwaalgast, met gevallen in Brittannië (acht: mei 2003 (zelfde vogel als in Nederland), juni 2005, mei 2007, augustus 2008, mei 2011, oktober 2014 en juli 2018); België (april 2008; zelfde vogel als in Nederland); Denemarken (augustus 2006); Finland (twee: juni 2007 en oktober 2011); Duitsland (zes: juli 1997, augustus 2006, mei 2012, mei 2015, mei 2015, juli 2019); Polen (juni 2019); Rusland (april 2018); Tsjechië (november 1993, november 2000 en oktober 2006; en Zwitserland (10: januari 1965, december 1983, september 1998, augustus 2001, mei 2007, mei 2010, mei 2010, september-oktober 2013, juni 2015 en mei 2020). Verder zijn dwaalgasten vastgesteld zuidelijk in Afrika (Ghana, januari 2014; en Guinee, oktober 2016) en een eerste-winter op Trinidad, Trinidad & Tobago (december 2016 tot augustus

2017), het eerste geval voor het Nearctische gebied, gevolgd door een waarneming van een sub-adult in Nieuw Amsterdam, c 10 km van Paramaribo, Suriname, van 22 maart tot 15 april 2018 (mogelijk hetzelfde exemplaar; Kenefick 2018, Kasius et al 2019; www.surinamebirds.nl/php/bird.php?laau).

#### Status in Nederland

De vogel van 's-Hertogenbosch is aanvaard door de Commissie Dwaalgasten Nederlandse Avifauna (CDNA) en betrof de derde Audouins Meeuw voor Nederland (www.dutchavifauna.nl/record/68001). Eerdere gevallen betroffen een tweede-zomer op 1 mei 2003 op Neeltje Jans, Zeeland (op 5-7 mei werd deze vogel waargenomen in Kent, Engeland), en een adult op 13 april 2008 bij de Pietersplas, Maastricht, Limburg (deze vogel was eerder die dag ontdekt net over de grens in België) (Walker 2003, Wolf 2003, 2004, Beckers 2008; www.dutchavifauna.nl).

#### Summary

AUDOUIN'S GULL AT 'S-HERTOGENBOSCH IN APRIL 2019 In the early morning of 18 April 2019, a near-adult Audouin's Gull *Larus audouinii* was photographed in flight over 's-Hertogenbosch, Noord-Brabant, the Netherlands. It flew together with a European Herring Gull *L. argentatus* and was only seen for a minute. The photographs show the distinctive grey upperparts and wing, as well as grey-washed underparts, pale tail and head, slender red bill and dark primaries. The dark markings on the primary coverts and small dark markings on the trailing edge of the wing indicate a third calendar-year bird. This was the third record for the Netherlands; previous birds were on 1 May 2003 (also seen in Kent, England, on 5-7 May) and 13 April 2008 (also seen in Belgium).

#### Verwijzingen

- Barthel, P H 1997. Kurzhinweise zur Bestimmung der Korallenmöwe *Larus audouinii*. Limicola 11: 286-295.
- Beckers, G 2008. DB Actueel: Audouins Meeuw in Belgisch-Nederlands Maasgebied. Dutch Birding 30: 201-212.
- BirdLife International 2019. Audouin's Gull *Larus audouinii*. Website: <https://tinyurl.com/wfcp4q4>.
- Burger, J, Gochfeld, M, Garcia, E F J & Sharpe, C J 2020. Audouin's Gull (*Ichthyaelus audouinii*). In: del Hoyo, J, Elliott, A, Sargatal, J, Christie, D A & de Juana, E (editors), Birds of the world, Ithaca. Website: <https://doi.org/10.2173/bow.audgul1.01>.
- van Duivendijk, N 2011. Advanced ID handbook – the Western Palearctic. London.
- Gutiérrez, R & Guinart, E 2008. The Ebro delta Audouin's gull colony and vagrancy potential to northwest Europe. Br Birds 101: 442-447.
- Kasius, B, Witkamp, C & Ingels, J 2019. Observation of Audouin's Gull *Ichthyaelus audouinii* in Suriname on South American mainland. Revista Brasileira Ornitol 27: 59-60.
- Kenefick, M 2017. Fourteenth report of the Trinidad and Tobago birds status and distribution committee: records submitted during 2016. Living World, Journal of Trinidad and Tobago Field Naturalists' Club 1: 64-69.
- King, J & Shirihai, H 1996. Identification and ageing of Audouin's Gull. Birding World 9: 52-61.
- Olsen, K M 2018. Gulls of the world. A photographic guide. London.
- Olsen, K M & Larsson, H 2004. Gulls of Europe, Asia and North America. Second edition. London.
- Walker, D 2003. The Audouin's Gull in Kent – a new British bird. Birding World 16: 199-202.
- Wolf, P A 2003. DB Actueel: Audouins Meeuw op Neeltje Jans. Dutch Birding 25: 205-206.
- Wolf, P A 2004. Audouins Meeuw op Neeltje Jans in mei 2003. Dutch Birding 26: 237-239

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# Trends in systematics

## Diversification and taxonomy of birds characteristic of the Palearctic desert belt

Birders are usually familiar with the classic zoogeographical delimitation of the world into the Afrotropical, Australasian, Nearctic, Neotropical, Oriental and Palearctic region. Although this goes back to Wallace (1876), it is still widely used (figure 1). However, a recent comprehensive study based on a combination of data on distributions and phylogenetic relationships of more than 21 000 species of amphibians, birds, and mammals identified 11 major zoogeographical realms (Holt et al 2013), among them the Saharo-Arabian (figure 1). It comprises the arid areas extending from North Africa including the Sahara desert eastward to the Middle East and the Arabian Peninsula and to the Thar Desert of Pakistan and India. The Saharo-Sindian desert belt is another term for this region (eg, Cowan 1996). The Caspian and Central Asian deserts (or Caspio-Central Asian deserts) are part of the Palearctic realm in Holt et al (2013) but share many bird species complexes characteristic of the Saharo-Arabian realm (Cowan 1996). The Saharo-Arabian and the Caspio-Central Asian deserts, hereafter referred to as the Palearctic desert belt, are comparatively species-poor regions. Desert birds exert, however, a special fascination on many birders, so several popular birding destinations are located there.

The formation of dry open habitats, characteristic of extensive parts of Africa and Asia today, started only in the middle Miocene c 15 million years ago (eg, Flower & Kennett 1994, Jacobs 2004, Byrne et al 2008). The origin of the Saharo-Arabian desert belt goes back to the late Miocene (7-11 million years ago) (Zhang et al 2014) with several shifts towards increased aridity afterwards (Demenocal 1995, 2004). At least during the last several millions of years, the Saharo-Arabian region has oscillated repeatedly between phases of increased aridity, during which deserts expanded, and more humid periods with retractions of deserts ('green Sahara') (Trauth et al 2009). Such a more humid period was prevalent at the end of the Pleistocene and beginning of the Holocene (c 11 000 years ago) but for the last c 7000 years, hyper-arid conditions have again been prevalent (Trauth et al 2009).

Periods of increased aridity could have led to population fragmentation followed by differentiation in allopatry by rendering extremely dry areas uninhabitable even for birds adapted to dry conditions (Guillaumet et al 2008, Schweizer & Shirihai 2013, Korrida & Schweizer 2014, Alaei Kakhki et al 2015, Schweizer et al 2018). Probably as a result of such repeated population fragmentations, several bird species or species complexes have multiple morphologically quite distinctive subspecies across the Palearctic desert belt, and are often divided in an eastern and a western 'group'. Some of them have been split as species-level taxa in recent years, whereas others continue to cause taxonomic headaches. This paper describes the current knowledge and taxonomic view(s) on some of the most interesting species or species groups.

### *Houbara Bustard complex*

The Houbara Bustard complex is usually split in an 'eastern' and 'western' species given that the two do not only differ in male plumage but also in courtship behaviour, including vocalisation (Alekseev 1985, Gaucher et al 1996, Knox et al 2002, Collinson 2004, Sangster et al 2004b, del Hoyo & Collar 2014, Gill et al 2020): Houbara Bustard *Chlamydotis undulata* is found in North Africa from western Egypt to Morocco and northern

FIGURE 1 Delimitation of different zoogeographic realms or regions based on Wallace (1876; above) and Holt et al (2013; below). Modified from Schweizer & Liu (2018).





**245** African Dunn's Lark / Afrikaanse Dunns Leeuwerik *Eremalauda dunnii dunnii*, Aousserd, Western Sahara, Morocco, 17 March 2018 (Arnaud B van den Berg/The Sound Approach)

**246** Striated Scrub Warblers / Gestreepte Woestijnzangers *Scotocerca inquieta striata*, Nakhal, Oman, 24 April 2014 (Arnaud B van den Berg/The Sound Approach)



Mauritania with the subspecies *C u fuertaventurae* restricted to the eastern Canary Islands, and Macqueen's Bustard *C macqueenii* occurs from eastern Egypt over the Arabian Peninsula to Pakistan and Central Asia. They mark a classical east-west split along the Palearctic desert belt with divergence probably caused by a period of extreme aridity (Korrida & Schweizer 2014). A distribution gap between them is located in the eastern part of the Sahara in Egypt, a hyperarid area that might have been uninhabitable even for highly desert-adapted species during dry periods of the Pleistocene and therefore acted as a barrier leading to east-west vicariance (separation of (sub) species; cf Korrida & Schweizer 2014). Although the two are reciprocally monophyletic in mtDNA markers analysed so far, their estimated time of separation at around 0.43 (Idaghdour et al 2004) to 0.9 million years ago (Korrida & Schweizer 2014) is comparatively recent, especially for a species with a generation time of five years (cf Idaghdour et al 2004). Nonetheless, given the differences listed above, it is generally assumed that Houbara and Macqueen's would not interbreed if they came into secondary contact (Sangster 1996). However, it was also argued that the differences in courtship behaviour might be 'functionally trivial' and would not prevent interbreeding in secondary contact (Cowan 2004, 2017). Species delimitation of allopatric taxa is inherently problematic when potential interbreeding in hypothetical secondary contact is taken into account as reproductive isolation can neither be refuted nor proven in such cases.

#### *Dunn's Lark complex*

The genus *Eremalauda* forms a comparatively old evolutionary lineage within larks (Alaudidae) and is most closely related to the genus *Calandrella* and to Dupont's Lark *Chersophilus duponti* (Alström et al 2013). *Eremalauda* only comprises two taxa which at the moment are still treated as conspecifics within Dunn's Lark *E d dunnii*. Again, these two taxa have a marked east-west split across the Saharo-Arabian desert belt, with African Dunn's Lark *E d dunnii* occurring from Western Sahara, Morocco, along the southern edge of the Sahara from Mauritania over Mali and Niger to Chad and Sudan and Arabian Dunn's Lark *E d eremodites* being restricted to the Arabian Peninsula. Both are partly nomadic with periodic irruptions into areas outside the normal breeding range (Kirwan et al 2020). The taxon *eremodites* was described only in 1923 by the infamous Richard Meinertzhagen. It differs from the nominate by

being larger and darker brown and by less pinkish streaking on the upperparts, as well as more prominent markings on the head sides (moustachial stripe) (Shirihai & Svensson 2018). The differences in size with no overlap in wing-length, head pattern, crown streaking and colouration yielded high enough scores by del Hoyo & Collar (2016), using the 'Tobias' scoring system' (Tobias et al 2010), to treat them as distinct species (under the proposed names Dunn's Lark *E dunnii* and Arabian Lark *E eremodites*). Shirihai & Svensson (2018) also split the two, taking into account further evidence like the distribution gap and unpublished putative genetic differences. This treatment has not (yet) been adopted by the IOC World Bird List (Gill et al 2020) or Dutch Birding. In his plate in van den Berg & The Sound Approach (2020), Killian Mullarney nuanced differences in plumage of both taxa, while differences in sound have not yet been fully studied. Comprehensive genetic data would provide a timeframe for the supposedly independent evolution of these two highly similar allopatric taxa and could assist to further elucidate their taxonomic status.

#### *Streaked Scrub Warbler complex*

Another taxon characteristic of the Palearctic desert belt is Streaked Scrub Warbler *Scotocerca inquieta*. Its taxonomy has already been discussed by Bergier et al (2013). Based on morphology and distribution patterns, it can be divided into two groups (del Hoyo & Collar 2016). The western one occurs from Mauritania along the northern edge of the Sahara over Morocco, Algeria, Tunisia to western Lybia, with subspecies *S i saharae* and *S i theresae*. The eastern group is distributed from north-eastern Egypt, the southern Levant and the Arabian Peninsula over Iraq, Iran and Afghanistan to arid parts Central Asia and Pakistan, with subspecies *S i inquieta*, *S i montana*, *S i striata*, *S i platyura*, *S i buryi* and *S i grisea* (the latter is synonymised with *S i striata* by Shirihai & Svensson 2018). The two groups are strictly allopatric with a distribution gap in the eastern part of the Sahara in Egypt, similar to the pattern seen in the Houbara Bustard complex (see above).

There are some consistent morphological differences between the two groups: the eastern group differs from the western one by a more prominent supercilium, a broader and more prominent eye-stripe particularly behind the eye, and a darker iris. Moreover, Bergier et al (2013) described marked differences in vocalisations between birds from the western group compared with those of the eastern group from Israel and Jordan (*S i inqui-*



247 African Desert Warbler / Afrikaanse Woestijngrasmus *Sylvia deserti*, Merzouga, Morocco, 1 April 2019  
(Arnaud B van den Berg/The Sound Approach)

eta) and one from Turkmenistan (*S i platyura*).

An unpublished cytochrome b sequence on GenBank, the public repository of genetic data, of an individual of *S inquieta* of unknown geographic origin differs markedly from North African birds (10.8% uncorrected divergence) (Alström et al 2011). While this level of genetic differentiation is surprisingly large, there are no indications that this sequence is erroneous or may be derived from a different species altogether (pers obs). As it was submitted by a researcher from the Zoological Institute of the Russian Academy of Science, it is possible that it refers to a bird collected on the breeding grounds of the eastern form in the area of the former Soviet Union (cf Alström et al 2011). In any case, this finding indicates that there might be a genetically highly differentiated group of Streaked Scrub Warblers, pending further investigations.

Based on the morphological, tentative vocal and putative genetic differences between the two groups and taking into account their pronounced allopatric distribution, they are split by Shirihai & Svensson (2018) into Levant Scrub Warbler *S inquieta* and Saharan Scrub Warbler *S saharae*. Neither HBW and BirdLife International (del Hoyo & Collar 2016), IOC World Bird List (Gill et al 2020) nor Dutch Birding have yet adopted this split.

Since the publication of Bergier et al (2013), additional sound recordings have become available on [www.xeno-canto.org](http://www.xeno-canto.org) which would allow for a study of vocal differences based on a more comprehensive geographic sampling of the eastern group. Moreover, such a study should be complemented by analyses of genetic variation especially within the eastern group. Particularly interesting would be data on *S i buryi* from Yemen and southwestern Saudi Arabia, which is the darkest and most heavily streaked taxon within the complex. Furthermore, van den Berg & The Sound Approach (2020) show differences in sound not only between Levant Scrub Warbler and Saharan Scrub Warbler but also between these and the taxon in northern Oman. Therefore, the final words on Streaked Scrub Warbler taxonomy have certainly not yet been spoken.

#### *Desert Warbler complex*

A broadly accepted east-west split is that between two true desert birds, African Desert Warbler *Sylvia deserti* and Asian Desert Warbler *S nana*. The latter breeds in the 'cold' desert from the Caspian Sea over Central Asia to north-western China and western Mongolia and winters in western South Asia, around the Persian Gulf, on the Arabian Peninsula and around the Red Sea (Shiri-





248 Zarudny's Sparrow / Aziatische Woestijnmus *Passer zarudnyi*, female, south of Turkmenabat, Turkmenistan, 3 June 2019 (James Eaton)

hai et al 2001). African Desert breeds in the western parts of the Sahara from Western Sahara over Mauritania, Morocco, Algeria and Tunisia to western Libya; it is resident or partly migratory (Shirihai et al 2001). The taxonomic treatment as two species follows the proposition of Shirihai et al (2001) based on differences in morphology (mainly plumage) and song between the two taxa. Given their diagnosability, they certainly qualify as 'phylogenetic species'. However, the decision of Shirihai et al (2001) was based on a then so-called 'modern' interpretation of the biological species concept (cf Helbig et al 2002) and assumed that differences among these strictly allopatric taxa might be sufficient to prevent interbreeding in potential secondary contact. Today, this is usually termed an integrative approach towards species delimitation (cf Sangster 2018).

As song is an important part of the mate recognition system, the described differences in song seem to have been instrumental in the general acceptance of this split (eg, Sangster et al 2004a). However, based on a recent analysis of available online recordings (up to 9 March 2016), Boesman (2016) reached the conclusion that variation in song *within* each species is of similar magnitude to that *between* species. Despite this apparent lack of vocal differentiation, application of the so-

called 'Tobias' scoring system' (Tobias et al 2010) by del Hoyo & Collar (2016) still supports separate status due to morphological differences. No genetic data of African Desert Warbler has been published so far. However, traditionally applied genetic data such as mtDNA divergence could merely indicate time of separation between the two strictly allopatric taxa. As morphological, acoustic or ecological differences, they could provide no direct evidence if they were able to interbreed in putative secondary contact.

#### *Desert Sparrow complex*

The taxonomy, identification and status of 'desert sparrows' have been discussed by Kirwan et al (2009). They proposed to split the African and Asian taxa based on differences in size and plumage and due to very limited sexual dimorphism in the latter (very pronounced in the African populations). The African species, Desert Sparrow *Passer simplex*, occurs in sandy deserts scattered basically throughout the entire Sahara (except western Libya and much of Egypt) (del Hoyo & Collar 2016); two subspecies are usually recognized, nominate *P s simplex* in the southern part and *P s saharae* in the northern part of its range, although the latter might turn out to be invalid once more material from the potential contact area is availa-



249 Zarudny's Sparrow / Aziatische Woestijnmus *Passer zarudnyi*, male, south of Turkmenabat, Turkmenistan, 3 June 2019 (James Eaton)

250 Zarudny's Sparrows / Aziatische Woestijnmussen *Passer zarudnyi*, male feeding juvenile, south of Turkmenabat, Turkmenistan, 3 June 2019 (James Eaton)





251 Desert Sparrow / Woestijnmus *Passer simplex*, male, Aousserd, Western Sahara, Morocco, 15 December 2017  
(Arnoud B van den Berg/The Sound Approach)

252 Desert Sparrow / Woestijnmus *Passer simplex*, female, Merzouga, Morocco, 26 March 2008  
(Arnoud B van den Berg/The Sound Approach)





253 Pale Rosefinch / Bleke Roodmus *Carpodacus stoliczkae salimalii*, male, Sowghdar valley near Bamiyan, Bamiyan, Afghanistan, 11 December 2006 (Raffael Ayé). Photographs of this taxon have been rarely published.



254 Pale Rosefinch / Bleke Roodmus *Carpodacus stoliczkae salimalii*, male, Pusht-e Jey, Ajar, Bamiyan, Afghanistan, 6 June 2008 (Raffael Ayé/WCS)

ble (Kirwan et al 2009). The enigmatic and rarely seen Asian species, Zarudny's Sparrow *P zarudnyi* (plate 248-250), is sparsely distributed in sandy desert habitats with scattered bushes in the Karakum desert of Turkmenistan and Kyzylkum desert of Uzbekistan (Kirwan et al 2009, Ayé et al 2012). Zarudny's and Desert are doubtless 'good' phylogenetic species, and they can also be considered separate species in an integrative approach towards species delimitation (cf Kirwan et al 2009), given that some of their differences might pertain to both ecology (bill structure) and behaviour (plumage, differences in sexual dimorphism). The split has consequently been widely accepted in recent years (eg, Ayé et al 2012, Sangster et al 2013, Dickinson & Christidis 2014, Gill et al 2020). Differences between the two are also sufficient to support a split when applying the 'Tobias' scoring system' (del Hoyo & Collar 2016). Moreover, Shirihai & Svensson (2018) mention unpublished genetic data indicating a divergence of 5% in mtDNA (marker not specified). Different genes of the mitochondria have different substitution rates (eg, Lerner et al 2011) but such a difference would indicate long-term separation even for faster evolving mtDNA genes. However, particularly given the lack of sexual dimorphism, which is rare in the genus *Passer* (Summers-Smith 1988), phylogenetic analyses are needed to confirm that Zarudny's is indeed the closest relative of Desert. If this is not the case, they can no longer be considered as an east-west split across the Palearctic desert belt.

#### *Sinai Rosefinch complex*

Another species complex with a pronounced disjunct distribution pattern across the Palearctic desert belt is Sinai Rosefinch *Carpodacus synoicus*. Usually, this species was treated as comprising four subspecies: nominate *C s synoicus*, from the western part of the Middle East including the Sinai peninsula, Egypt, and three additional subspecies in Central Asia, ie, *C s salimalii* in the Hindu Kush of Afghanistan, *C s stoliczkae* in western China (Xinjiang and Qinghai) and *C s beicki* in central China (Qinghai and Gansu). Compared with nominate *synoicus*, males of the Central Asian taxa are generally more uniformly pale brown on the upperparts with no rose or only a very faint rose tinge on the mantle and a more restricted pinkish rump, and less intensively rose-coloured underparts (Vaurie 1959). Moreover, they are larger with a longer tail compared with nominate *synoicus* (del Hoyo & Collar 2016) and at least *beicki* also differs in bill and wing shape from the latter (Tietze et al 2013). Genetic analysis revealed the complex to be monophyletic as expected but found pronounced differences between the two groups: nominate *synoicus* constitutes a separate mtDNA lineage from the Central Asian populations (*salimalii* and *beicki*; *stoliczkae* was not analysed) that diverged almost three million years ago (Tietze et al 2013). Mainly based on these genetic differences, Tietze et al (2013) proposed a two-way split into monotypic *C synoicus* (Sinai Rosefinch) and *C stoliczkae* (Pale Rosefinch), the latter with subspecies *C stoliczkae stoliczkae*, *C stoliczkae salimalii* (plate 253-254) and *C stolicz-*

*kae beicki*. This split can be justified when applying an integrative species concept and was adopted by Dickinson & Christidis (2014) and Gill et al (2020). Morphological differences between the two groups are also sufficient to treat them as separate species by del Hoyo & Collar (2016).

### House Bunting complex

Genetic data has recently been used to reconstruct the evolutionary history of another species complex characteristic of the Saharo-Arabian desert belt: the House Bunting complex. This complex has traditionally been considered as a single polytypic species distributed in the Sahara from Mauritania over Morocco and then patchily to eastern and north-western Chad, with a disjunct population in coastal north-eastern Africa south to northern Kenya, as well as from the Middle East to north-western India (cf Kirwan & Shirihihi 2007; figure 2). Based on a review of its morphology and vocalisations, Kirwan & Shirihihi (2007) proposed a split into two taxa, Striolated Bunting *Emberiza striolata* (hereafter *striolata*) in the east of the range, including the subspecies *E s saturiator* and the controversial taxon *E s 'jebelmarrae'* (see below; cf figure 2), and House Bunting *E sahari* (hereafter *sahari*) in the west. This treatment has been widely adopted since (eg, Rising et al 2011, Sangster et al 2013, del Hoyo & Collar 2016, Gill et al 2020). Moreover, Olsson et al (2013) revealed levels of differentiation in mtDNA between the two groups (3.0-3.6% in cytochrome b) as



255 House Bunting / Huisgors *Emberiza sahari*, male, Paradise Valley, Agadir, Morocco, 7 November 2014  
(Arnoud B van den Berg/The Sound Approach)

large as in taxa treated as species, although the geographic sampling was rather limited in this study. This pronounced differentiation in mtDNA indicating a divergence time of c 1.5 million years was later corroborated by Schweizer et al (2018) with samples from the entire range of the two groups (figure 2). However, individuals with characters intermediate between *sahari* and *striolata* have been reported from northern Darfur in Sudan and from the Ennedi Massif in north-eastern Chad (Lynes 1924, Niethammer 1955) indicating putative hybridisation between the two (cf Byers et al

FIGURE 2 Distribution of different taxa of House Bunting *Emberiza sahari* and Striolated Bunting *E striolata* and dated mtDNA gene tree. Note that samples of *E striolata 'jebelmarrae'* cluster within *E sahari*. Stars in map indicate location of samples for genetic analyses. Modified from Schweizer et al (2018).



1995, Kirwan & Shirihai 2007) and therefore raising some doubts about the proposed split. However, a fresh look at these specimens by Schweizer et al (2018) found no morphological and genetic differences between purported intermediates from the Ennedi Massif and *sahari*. Moreover, the individuals from northern Darfur were revealed to not differ in morphology from *E s jebelmarrae*. This controversial taxon was described from western Sudan but has been suggested to be a synonym of *E s satoriator* (cf figure 2) by some authors (Meinertzhagen 1954, Mackworth-Praed & Grant 1955, Niethammer 1955, Paynter & Storer 1970), which has been reaffirmed by Kirwan & Shirihai (2007). Surprisingly, Schweizer et al (2018) found individuals of *E striolata jebelmarrae* to cluster within *sahari* in their mtDNA gene tree. Different processes can lead to incongruence between species relationships (and/or morphology) and inferred gene trees based on single recombination units (gene trees) such as mtDNA as explained by Schweizer & Burri (2019). In the case of the House Bunting complex, this might be the result of introgression of mtDNA haplotypes from *sahari* into *striolata* when the two came into secondary contact, which in turn may have happened when suitable climate led to range expansions. Any such introgression was likely ancient or very limited in extent, given the morphological integrity of *sahari* and *striolata*. However, this should be confirmed with genome-wide data (cf Schweizer & Burri 2019).

#### Additional examples

There are other species complexes or polyphyletic species occurring across the Palearctic desert belt of which the taxonomy should be revised or tested with genetic data. Among them is Desert Lark *Ammomanes deserti*, which is widely distributed across the Palearctic desert and shows a complex geographic variation with no fewer than 22 (Dickinson & Christidis 2014, Gill et al 2020) to 24 (del Hoyo & Collar 2016) accepted subspecies. These differ mainly in colouration which might be related to local soil colouration and may therefore have evolved rapidly and to some extent represent phenotypic plasticity, even potentially temporal plasticity at the individual level (Bates 1936, Donald et al 2017). A preliminary mtDNA analyses with limited taxonomic and geographic sampling revealed four rather distinct evolutionary lineages, apparently unrelated to plumage colour (Alström et al 2013) which asks for a more comprehensive study. Additionally, van den Berg & The Sound Approach (2020) illustrate remarkable

differences in vocalisations between Desert Larks in the Maghreb, Levant and Oman.

As discussed by Schweizer & Burri (2019), the wheatear taxa Eastern Mourning *Oenanthe lugens*, Basalt *O l warriar*, Iranian *O l persica* and Western Mourning Wheatear *O halophila*, occurring across the Saharo-Arabian desert belt, traditionally considered conspecific as part of the 'Mourning Wheatear' complex, are paraphyletic in mtDNA (Schweizer & Shirihai 2013) and have to be studied with genome-wide data.

Similarly, the morphologically similar taxa of the Great Grey Shrike *Lanius excubitor* complex occurring across the Palearctic desert belt are not monophyletic in their mtDNA either (Olsson et al 2010, Poelstra 2010), also awaiting testing with genome-wide data.

Omani Owl *Strix butleri* and Desert Owl *S hadorami* might also represent an east-west split across Palearctic deserts, although the latter might alternatively be more closely related to African Owl *S woodfordii* (Kirwan et al 2015, Robb et al 2016).

#### Concluding remarks

There are still many open questions on taxonomy and diversification of birds of the Palearctic desert belt. Genetic studies will certainly be essential to infer their history of diversification, and by using genome-wide data, it will even be possible to investigate patterns of (historical) gene flow among different populations. Genomic data can nowadays even be generated by using museum specimens (eg, sampling of toe pads). Consequently, in many cases, existing museum collections can be used so that there is no need for additional sampling in politically sensitive regions. Environmental alterations triggered by Pleistocene climate change doubtlessly drove diversification of arid-adapted bird groups in the Saharo-Arabian and Central Asian deserts by repeated events of population fragmentation. However, many lineages were probably not able to cope with the climate and associated habitat change and eventually went extinct during this time period. Increasing desertification under ongoing climate change could potentially trigger not only range fragmentation but also range expansions of arid-adapted birds, such as documented in the House Bunting complex in recent years (eg, Schneider 2005, Amezian et al 2006, Moulai 2019). However, many of the highly adapted desert species could lose their preferred habitat in the near future and eventually go extinct if they are not able to adapt to the altered conditions.

## References

- Alaei Kakhki, N, Aliabadian, M & Schweizer, M 2015. Out of Africa: biogeographic history of the open-habitat chats (Aves, Muscicapidae: Saxicolinae) across arid areas of the old world. *Zool Scripta* 45: 237-251.
- Alekseev, A F 1985. The Houbara Bustard in the north-west Kyzylkum. *Bustard Studies* 3: 87-92.
- Alström, P, Barnes, K N, Olsson, U, Barker, F K, Bloomer, P, Khan, A A, Qureshi, M A, Guillaumet, A, Crochet, P-A & Ryan, P G 2013. Multilocus phylogeny of the avian family Alaudidae (larks) reveals complex morphological evolution, non-monophyletic genera and hidden species diversity. *Mol Phylogenet Evol* 69: 1043-1056.
- Alström, P, Fjeldsa, J, Fregin, S & Olsson, U 2011. Gross morphology betrays phylogeny: the Scrub Warbler *Scotocerca inquieta* is not a cisticolid. *Ibis* 153: 87-97.
- Amezian, M, Bensusan, K, Perez, C & Thompson, I 2006. Is House Bunting about to colonise Europe? *Birding World* 19: 163.
- Ayé, R, Schweizer, M & Roth, T 2012. Birds of Central Asia – Kazakhstan, Turkmenistan, Uzbekistan, Kyrgyzstan, Tajikistan and Afghanistan. London.
- Bates, G L 1936. The races of *Ammomanes deserti* found in Arabia and near its borders. *Ibis*: 331-334.
- van den Berg, A B & The Sound Approach 2020. Morocco: sharing the birds. Poole.
- Bergier, P, Thévenot, M, van den Berg, A B & The Sound Approach 2013. Distribution, habitat, identification and taxonomy of Streaked Scrub Warbler in Morocco. *Dutch Birding* 35: 107-121.
- Boesman, P 2016. Notes on the vocalizations of Desert Warbler (*Sylvia nana*). In: del Hoyo, J, Elliott, A, Sargatal, J, Christie, D A & de Juana, E (editors), *Birds of the world*, Ithaca. Website: <https://birdsoftheworld.org/bow/ornith-notes/JN100260>.
- Byers, C, Olsson, U & Curson, J 1995. Buntings and sparrows: a guide to the buntings and North American sparrows. Mountfield.
- Byrne, M, Yeates, D K, Joseph, L, Kearney, M, Bowler, J, Williams, M A J, Cooper, S, Donnellan, S C, Keogh, J S, Leys, R, Melville, J, Murphy, D J, Porch, N & Wyrwoll, K H 2008. Birth of a biome: insights into the assembly and maintenance of the Australian arid zone biota. *Mol Ecol* 17: 4398-4417.
- Collinson, M 2004. Are there really two species of houbara? A response from the TSC. *Br Birds* 97: 348.
- Cowan, P J 1996. Desert birds of the Caspio-Central-Asian desert. *Glob Ecol Biogeogr* 5: 18-22.
- Cowan, P J 2004. Are there really two species of houbara? *Br Birds* 97: 346-347.
- Cowan, P J 2017. Only one species of houbara? *Br Birds* 110: 356-357.
- Demenocal, P B 1995. Plio-Pleistocene African climate. *Science* 270: 53-59.
- Demenocal, P B 2004. African climate change and faunal evolution during the Pliocene-Pleistocene. *Earth Planet Sci Lett* 220: 3-24.
- Dickinson, E C & Christidis, L (editors) 2014. The Howard and Moore complete checklist of the birds of the world. Fourth edition, vol 2: Passerines. Eastbourne.
- Donald, P F, Alström, P & Engelbrecht, D 2017. Possible mechanisms of substrate colour-matching in larks (Alaudidae) and their taxonomic implications. *Ibis* 159: 699-702.
- Flower, B P & Kennett, J P 1994. The middle Miocene climatic transition – east Antarctic ice-sheet development, deep-ocean circulation and global carbon cycling. *Palaeogeogr Palaeoclimatol* 108: 537-555.
- Gaucher, P, Paillat, P, Chappuis, C, Saint Jalme, M, Lotfikhah, F & Wink, M 1996. Taxonomy of the Houbara Bustard *Chlamydotis undulata* subspecies considered on the basis of sexual display and genetic divergence. *Ibis* 138: 273-282.
- Gill, F, Donsker, D & Rasmussen, P (editors) 2020. IOC world bird list (version 10.1). Website: [www.world-birdnames.org](http://www.world-birdnames.org).
- Guillaumet, A, Crochet, P-A & Pons, J M 2008. Climate-driven diversification in two widespread *Galerida* larks. *BMC Evol Biol* 8: 32.
- Helbig, A J, Knox, A G, Parkin, D T, Sangster, G & Collinson, M 2002. Guidelines for assigning species rank. *Ibis* 144: 518-525.
- Holt, B, Lessard, J P, Borregaard, M K, Fritz, S A, Araujo, M B, Dimitrov, D, Fabre, P H, Graham, C H, Graves, G R, Jonsson, K A, Nogues-Bravo, D, Wang, Z H, Whittaker, R J, Fjeldsa, J & Rahbek, C 2013. An update of Wallace's zoogeographic regions of the world. *Science* 339: 74-78.
- del Hoyo, J & Collar, N J 2014, 2016. HBW and BirdLife International illustrated checklist of the birds of the world 1: non-passerines; 2: passerines. Barcelona.
- Idaghdour, Y, Broderick, D, Korrida, A & Chbel, F 2004. Mitochondrial control region diversity of the houbara bustard *Chlamydotis undulata* complex and genetic structure along the Atlantic seaboard of North Africa. *Mol Ecol* 13: 43-54.
- Jacobs, B F 2004. Palaeobotanical studies from tropical Africa: relevance to the evolution of forest, woodland and savannah biomes. *Philos Trans R Soc Lond, Ser B Biol Sci* 359: 1573-1583.
- Kirwan, G M & Shirihai, H 2007. Species limits in the House Bunting complex. *Dutch Birding* 29: 1-19.
- Kirwan, G M, Schweizer, M, Ayé, R & Grieve, A 2009. Taxonomy, identification and status of Desert Sparrows. *Dutch Birding* 31: 139-158.
- Kirwan, G M, Schweizer, M & Copete, J L 2015. Multiple lines of evidence confirm that Hume's Owl *Strix butleri* (A. O. Hume, 1878) is two species, with description of an unnamed species (Aves: Non-Passeriformes: Strigidae). *Zootaxa* 3904: 28-50.
- Kirwan, G M, del Hoyo, J, de Juana, E, Collar, N, Suárez, F & Perlman, Y 2020. Dunn's Lark (*Eremalauta eremodites*). In: del Hoyo, J, Elliott, A, Sargatal, J, Christie, D A & de Juana, E (editors), *Birds of the world*, Ithaca. Website: <https://doi.org/10.2173/bow.dunlar2.02>.
- Knox, A G, Collinson, M, Helbig, A J, Parkin, D T & Sangster, G 2002. Taxonomic recommendations for British birds. *Ibis* 144: 707-710.
- Korrida, A & Schweizer, M 2014. Diversification across

- the Palearctic desert belt throughout the Pleistocene: phylogeographic history of the Houbara-Macqueen's bustard complex (Otididae: *Chlamydotis*) as revealed by mitochondrial DNA. *J Zool Syst Evol Res* 52: 65-74.
- Lerner, H R L, Meyer, M, James, H F, Hofreiter, M & Fleischer, R C 2011. Multilocus resolution of phylogeny and timescale in the extant adaptive radiation of Hawaiian honeycreepers. *Curr Biol* 21: 1838-1844.
- Lynes, A H 1924. On the birds of north and central Darfur, with notes on the west-central Kordofan and north Nuba provinces of British Sudan. *Ibis* 66: 648-719.
- Mackworth-Praed, C W & Grant, C H B 1955. Birds of eastern and north-eastern Africa 2. London.
- Meinertzhagen, R 1954. Birds of Arabia. London.
- Moulaï, R 2019. Expansion du Bruant du Sahara *Emberiza sahari* dans le nord de l'Algérie. *Alauda* 87: 285-299.
- Niethammer, G 1955. Zur Vogelwelt des Ennedi-Gebirges (Französisch Äquatorial-Afrika). *Bonn Zool Beitr* 6: 29-80.
- Olsson, U, Alström, P, Svensson, L, Aliabadian, M & Sundberg, P 2010. The *Lanius excubitor* (Aves, Passeriformes) conundrum-taxonomic dilemma when molecular and non-molecular data tell different stories. *Mol Phylogenet Evol* 55: 347-357.
- Olsson, U, Yosef, R & Alström, P 2013. Assessment of species limits in African 'brown buntings' (*Emberiza*, Passeriformes) based on mitochondrial and nuclear sequence data. *Ibis* 155: 534-543.
- Paynter, R A & Storer, R S 1970. Check-list of the birds of the world 13. Cambridge.
- Poelstra, J W 2010. Speciation in shades of grey: the great grey shrike complex. *Dutch Birding* 32: 259-264.
- Rising, J D, Jaramillo, A, Copete, J L, Madge, S C & Ryan, P G 2011. Family Emberizidae (Buntings and New World Sparrows). In: del Hoyo, J, Elliott & Christie, D A (editors), Handbook of the birds of the world 16. Barcelona, p 428-683.
- Robb, M S, Sangster, G, Aliabadian, M, van den Berg, A B, Constantine, M, Irestedt, M, Khani, A, Musavi, S B, Nunes, J M G, Willson, M S & Walsh, A J 2016. The rediscovery of *Strix butleri* (Hume, 1878) in Oman and Iran, with molecular resolution of the identity of *Strix omanensis* Robb, van den Berg and Constantine, 2013. *Avian Res* 7: 7.
- Sangster, G 1996. Taxonomy of Houbara and Macqueen's Bustards and neglect of intraspecific diversity. *Dutch Birding* 18: 248-254.
- Sangster, G 2018. Integrative taxonomy of birds: the nature and delimitation of species. In: Tietze, D T (editor), *Bird species*, Cham, p 9-37.
- Sangster, G, Collinson, J M, Helbig, A J, Knox, A G & Parkin, D T 2004a. Taxonomic recommendations for British birds: second report. *Ibis* 146: 153-157.
- Sangster, G, Collinson, J M, Helbig, A J, Knox, A G & Parkin, D T 2004b. The taxonomic status of Macqueen's Bustard. *Br Birds* 97: 60-67.
- Sangster, G, Collinson, J M, Crochet, P-A, Knox, A G, Parkin, D T & Votier, S C 2013. Taxonomic recommendations for Western Palearctic birds: ninth report. *Ibis* 155: 898-907.
- Schneider, R 2005. Notes on the distribution of the House Bunting *Emberiza striolata* in Tunisia. *Bull Afr Bird Club* 12: 14-17.
- Schweizer, M & Burri, R 2019. New insights in taxonomy of wheatears. *Dutch Birding* 41: 115-120.
- Schweizer, M & Liu, Y 2018. Avian diversity and distributions and their evolution through space and time. In: Tietze, D T (editor), *Bird species*, Cham, p 129-145.
- Schweizer, M & Shirihai, H 2013. Phylogeny of the *Oenanthe lugens* complex (Aves, Muscicapidae: Saxicolinae): paraphyly of a morphologically cohesive group within a recent radiation of open-habitat chats. *Mol Phylogenet Evol* 69: 450-461.
- Schweizer, M, Shirihai, H, Schmaljohann, H & Kirwan, G M 2018. Phylogeography of the House Bunting complex: discordance between species limits and genetic markers. *J Ornithol* 159: 47-61.
- Shirihai, H, Gargallo, G, Helbig, A J, Harris, A & Cottridge, D 2001. *Sylvia* warblers. Identification, taxonomy and phylogeny of the genus *Sylvia*. London.
- Shirihai, H & Svensson, L 2018. Handbook of Western Palearctic birds 1 & 2 – Passerines. London.
- Summers-Smith, J D 1988. The sparrows: a study of the genus *Passer*. Calton.
- Tietze, D T, Packert, M, Martens, J, Lehmann, H & Sun, Y H 2013. Complete phylogeny and historical biogeography of true rosefinches (Aves: *Carpodacus*). *Zool J Linn Soc* 169: 215-234.
- Tobias, J A, Seddon, N, Spottiswoode, C N, Pilgrim, J D, Fishpool, L D C & Collar, N J 2010. Quantitative criteria for species delimitation. *Ibis* 152: 724-746.
- Trauth, M H, Larrasoana, J C & Mudelsee, M 2009. Trends, rhythms and events in Plio-Pleistocene African climate. *Quat Sci Rev* 28: 399-411.
- Vaurie, C 1959. The birds of the Palearctic fauna. A systematic reference. Passeriformes. London.
- Wallace, A R 1876. The geographical distribution of animals: with a study of the relations of living and extinct faunas as elucidating the past changes of the earth's surface. New York.
- Zhang, Z S, Ramstein, G, Schuster, M, Li, C, Contoux, C & Yan, Q 2014. Aridification of the Sahara desert caused by Tethys Sea shrinkage during the Late Miocene. *Nature* 513: 401-404.

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# WP reports

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This review lists rare and interesting Western Palearctic birds reported mainly from **April to late May 2020**. The reports are largely unchecked and their publication here does not imply future acceptance by a rarities committee. Observers are requested to submit their records to each country's rarities committee. Corrections are welcome and will be published.

**GEESE TO DUCKS** The first **Barnacle Goose** *Branta leucopsis* for Mongolia was photographed at the Khurkh valley on 26 April. Salim et al (2020) give details of records of **White-faced Whistling Duck** *Dendrocygna viduata* in Iraq in 2015-17, mostly reported by hunters (eg, 10 birds in the Dalmaj Marsh in winter 2015; two collected from a flock of 10 in lakes south of Babil governorate in winter 2016; and seven at a wetland near Al-Aziziyah district in winter 2017); they concluded that the origin of these birds is unclear (Sandgrouse 42: 115-117, 2020), and this species is not on the WP list. In Scotland, the male **Steller's Eider** *Polysticta stelleri* off Papa Westray, Orkney, from 29 October 2019 remained until at least 21 April. In Estonia, 190 were counted at Ninase, Saaremaa, on 31 March. The long-staying male **White-winged Scoter** *Melanitta deglandi* off Musselburgh, East Lothian, Scotland, stayed until 7 April. In

Sweden, two adult males **Stejneger's Scoter** *M stejnegeri* were found at Landsort, Södermanland, on 27 April and 2 May and then at Svenska Högarna, Uppland, on 3 May. At least four **Black Scoters** *M americana* were reported in Denmark in April. An adult male was seen off Domsten, Skåne, Sweden, on 15 April and another turned up at Þvottárskríður, Iceland, on 5 May. The fifth **Ring-necked Duck** *Aythya collaris* for Hungary was seen at Tiszaalpár, Bács-Kiskun, on 29 March. If accepted, a male **Blue-winged Teal** *Spatula discors* at Kotvice fishponds, Studénka, on 17-30 April will be the second for Czechia.

**GROUSE TO DOVES** Rando et al (2020) described three newly discovered extinct species of **quail** *Coturnix*, two of which inhabited the archipelago of Madeira (*C lignorum* from Madeira and *C alabrevis* from Porto Santo) and one from the Cape Verde Islands (*C centensis* from São Vicente); the fossil record also indicates the presence of additional species of extinct endemic quails on Graciosa and Santa Maria, Azores, and the Desertas Islands, Madeira (Zool J Linn Soc 188: 1296-1317, 2020). The first **Lesser Flamingo** *Phoeniconaias minor* for Qatar at Al Shamal on 3 December 2013 has recently been accepted. The first breeding of the species for Saudi Arabia oc-

**256** Black Scoter / Amerikaanse Zee-eend *Melanitta americana*, adult male, with Common Scoters / Zwarte Zee-eenden *M nigra*, Dziwnów, Western Pomerania, Poland, 26 March 2020 (Zbigniew Kajzer) cf Dutch Birding 42: 123, 2020





**257** Blue-winged Teal / Blauwvleugeltaling *Spatula discors*, male, with Garganey / Zomertaling *S querquedula*, male, Kotvice, Studénka, Czechia, 18 April 2020 (Jan Studecký)

**258** Little Bustard / Kleine Trap *Tetrax tetrax*, adult male, Lešná, Vsetin, Czechia, 22 March 2020 (Jiří Kött)



curred in the south-west on the coast south of Jizan in December 2018, where 10 nests were found and a record 420 individuals were counted (Sandgrouse 42: 111-114, 2020). A **Stock Dove** *Columba oenas* at Irrikaya farm on 3 December 2019 was the first for Qatar (Sandgrouse 42: 143-154, 2020). In Finland, an **Oriental Turtle Dove** *Streptopelia orientalis* was seen at Ivalo, Inari, on 9 May. The 11th for the Netherlands (all since 2009) was belatedly reported at Alkmaar, Noord-Holland, from 14 February to 31 March (**Rufous Turtle Dove** *S o meena*). If accepted, a **Eurasian Collared Dove** *S decaocto* photographed at Manabí on 19 February may be the first for Ecuador. A **Mourning Dove** *Zenaida macroura* photographed north of Vejle, Jylland, on 25 May was the second for Denmark.

**NIGHTJARS TO BUSTARDS** Genetical and morphological studies of the only known specimen of **Vaurie's Nightjar** *Caprimulgus centralasicus*, an adult female collected south-east of Yarkand, Xinjiang, China, on 7 September 1929, showed that it most likely concerned a European Nightjar *C europaeus plumipes* (Schweizer et al (2020) in J Ornithol). The second record of **Common Swift** *Apus apus* for South America concerned four individuals photographed near Transworld Radio Tower on Bonaire, Leeward Antilles, in the Caribbean Sea, on 3 May (two were again seen on 4 May and one on 5-6 May); the first was in Suriname in July 2012 (Cotinga 36: 107-109, 2014). The second **African Crane** *Crex egregia* for

Morocco was found dead at Sebkhath Skaymate, Dakhla, Western Sahara, on 13 February 2019; the first was also near Dakhla on 11-18 December 2009 (Go-South Bull 17: 61-64, 2020). A record 56 pairs of **Common Crane** *Grus grus* were counted in Britain in 2019 (47 pairs attempted to breed, raising 26 chicks); the total British population is now believed to be over 200 birds. The first **Little Bustard** *Tetrax tetrax* for Czechia since 1959 stayed near Hranice, Přešov, on 20-22 March and, on the latter date, it turned up at Lešná, Vsetín. Females were observed at Ristna, Hiidenmaa, Estonia, on 2 May (fifth, and first since 1935) and at Nabbelund, Öland, Sweden, on 5 May.

**TUBENOSES TO GANNETS** The third **Swinhoe's Storm Petrel** *Hydrobates monorhis* for mainland Portugal was seen at Cabo Raso, Lisboa, on 15 May. A **White-chinned Petrel** *Procellaria aequinoctialis* photographed at Scapa Flow, Orkney, Scotland, on 25 May was the first for the WP; only a few have ever been recorded in North America, including one as far north as Maine, USA. In Egypt, a **Yellow-billed Stork** *Mycteria ibis* migrated with a flock of 49 White Storks *Ciconia ciconia* over Ras Shukeir, Gulf of Suez, on 2 May. Christopoulou et al (2020) summarised the distribution and numbers of **Dalmatian Pelican** *Pelecanus crispus* on the Central Asian flyway in 1990-2015 and named 54 sites where the species breeds regularly or occasionally; the estimated breeding population was 3000-4366 pairs in 2000-

259 Yellow-crowned Night Heron / Geelkruinkwak *Nyctanassa violacea*, adult, Faial, Azores, 9 April 2020  
(Ana Alves)





**260** Mongolian Sand Plover / Mongoolse Plevier *Anarhynchus mongolus*, female, Reesholm, Schleswig-Holstein, Germany, 9 May 2020 (*Thorsten Runge/naturbildersh.de*)

**261** Three-banded Plover / Driebandplevier *Charadrius tricollaris*, adult, Ma'ayan Tzvi, Israel, 12 April 2020 (*Shachar Alterman*)





**262** Long-billed Dowitchers / Grote Grijsz Snippen *Limnodromus scolopaceus*, Buda island, Ebro delta, Tarragona, Spain, 6 April 2020 (David Bigas)

**263** Stilt Sandpiper / Steltstrandloper *Calidris himantopus*, first-summer, Buda island, Ebro delta, Tarragona, Spain, 13 April 2020 (David Bigas)





**264** African Crane / Afrikaanse Kwartelkoning *Crex egregia*, Sebkhata Skaymate, Dakhla, Western Sahara, Morocco, 13 February 2019 (*Abdeljebbar Qninba*) **265** Audouin's Gull / Audouin's Meeuw *Larus audouinii*, third calendar-year, Les Grassettes, Vaud, Switzerland, 14 May 2020 (*Sebastian Poirier*) **266** Slender-billed Gull / Dunbekmeeuw *Chroicocephalus genei*, adult, with Black-headed Gull / Kokmeeuw *C. ridibundus*, Préverenges, Vaud, Switzerland, 2 May 2020 (*Lionel Maumary*) **267** Glaucous-winged Gull / Beringmeeuw *Larus glaucescens*, fourth calendar-year, Kvaløysvågen, Tromsø, Troms, Norway, 11 May 2020 (*Fredrik Broms*)

10, probably increasing (Sandgrouse 42: 2-28, 2020). An adult **Yellow-crowned Night Heron** *Nyctanassa violacea* on Faial on 9-14 April was the sixth for the Azores and the seventh for the WP. The first for mainland Europe was present at Faro, Portugal, from 19 May onwards. The first **Western Reef Heron** *Egretta gularis gularis* for Guyana was photographed along the Mahaica river on 18 February. On 9 May, a **Brown Booby** *Sula leucogaster* was photographed when perched for several hours on a Belgian trawler sailing from 5 km off the eastern end of Isle of Wight, England, into French waters. The fifth for the Canary Islands was videoed on a yacht off La Palma on 18 May; it had been ringed on Anguilla, Lesser Antilles. The long-staying **Pygmy Cormorant** *Microcarbo pygmaeus* at Bruxelles, Belgium, from January 2018 remained through mid-April.

**WADERS** A **Eurasian Oystercatcher** *Haematopus ostralegus* at Ellison on 9 April was the fifth for Newfoundland, Canada, and the sixth for North America. The first **Three-banded Plover** *Charadrius tricollaris* for Israel was photographed at Ma'ayan Tzvi from 12 April to 13 May (also the first in the WP outside Egypt). Donald et al (2020) used satellite tagging, colour-ringing and field surveys to study the migration of **Sociable Lapwings** *Vanellus gregarius* from the breeding grounds in Kazakhstan. The western route (c 5200 km) runs west to southern Russia, then south through the Caucasus and the Levant to wintering areas in Saudi Arabia and eastern Sudan. The eastern route (c 2800 km) runs south to Turkmenistan and Uzbekistan, then over the mountains of northern Afghanistan to wintering areas in Pakistan and north-western India. The recently developed irrigated fields in Arabia may have allowed birds of the western flyway to winter



**268** Eastern Imperial Eagle / Keizerarend *Aquila heliaca*, subadult, Heule, Kortrijk, West-Vlaanderen, Belgium, 12 April 2020 (*Bart Augustijns*) **269** Bay-backed Shrike / Bruinrugklauwier *Lanius vittatus*, male, Buri, Bahrain, 18 April 2020 (*Howard King*) **270** Greater Short-toed Lark / Kortteenleeuwerik *Calandrella brachydactyla*, Riva, Pavilosta, Latvia, 24 April 2020 (*Kaspars Funts*) **271** Pied Wheatear / Bonte Tapuit *Oenanthe pleschanka*, second calendar-year male, Weiden am See, Burgenland, Austria, 26 April 2020 (*Leander Khil*)

well north of their previous wintering range, at new wintering areas along the coasts of the Arabian Gulf. Currently, the global population is estimated at c 24 000 individuals; illegal hunting along the western flyway was identified as the most plausible cause of the species' decline (<https://tinyurl.com/yaorn252>). In Uzbekistan, as many as 4685 were counted at Talimarzhan reservoir on 26 September 2019 (*Sandgrouse* 42: 162-184, 2020). The first **Oriental Plover** *Anarhynchus veredus* for Laos was seen at Vientiane on 13 April. A **Mongolian Sand Plover** *A mongolus* at Reesholm, Schleswig-Holstein, on 8-9 May was the first for Germany. If accepted, a **Eurasian Whimbrel** *Numenius phaeopus* photographed at Cayenne on 28 April may be the first for French Guiana. A **Eurasian Curlew** *N arquata* found on the western shore of Punta Rasa, San Clemente del Tuyú, Buenos Aires, on 27-28 January 2010 was the first for Argentina and South America (*Cotinga* 41: 41-43, 2019). The third **Stilt Sand-**

**piper** *Calidris himantopus* for Spain was discovered on Buda island, Ebro delta, Tarragona, on 13 April; three **Long-billed Dowitchers** *Limnodromus scolopaceus* also stayed here on 5-9 April. A **Spotted Sandpiper** *Actitis macularius* at Stokkseyri, Suðurland, on 12 May was the ninth for Iceland. On 18 May, a **Solitary Sandpiper** *Tringa solitaria* was found on St Mary's, Scilly, England. A **Wilson's Snipe** *Gallinago delicata* displaying at How, Tierp, Uppland, on 18-19 April was probably the same individual present here as the first for Sweden on 13-26 April 2019.

**AUKS TO TERNS** On Bjørnøya, Norway, the **Tufted Puffin** *Fratercula cirrhata* first seen on 14 July 2019 was still alive and photographed on 28 May. An adult **Slender-billed Gull** *Chroicocephalus genei* photographed at Préverenges, Vaud, on 2 May was (already) the 30th for Switzerland. An adult **Laughing Gull** *Larus atricilla* on



**272** Booted Eagle / Dwergarend *Aquila pennata*, second calendar-year, Vlieland, Friesland, Netherlands, 22 May 2020 (*Marten Miske*) **273** Brahminy Kite / Brahmaanse Wouw *Haliastur indus*, adult, Bahukalat, Sistan and Baluchestan, Iran, mid-October 2013 (*Amirhossein Aghaei*) **274** Lesser Kestrel / Kleine Torenvalk *Falco naumanni*, adult male, St Mary's, Scilly, England, 22 March 2020 (*Joe Pender*)







**275** Steppe Eagle / Stepparend *Aquila nipalensis*, third calendar-year, Veluwemeer, Flevoland, Netherlands, 13 May 2020 (*Ralph Buij*) **276** Steppe Eagle / Stepparend *Aquila nipalensis*, second calendar-year, Wilhelminadorp, Zeeland, Netherlands, 22 May 2020 (*Jaap Denee*) **277** Steppe Eagle / Stepparend *Aquila nipalensis*, second calendar-year, Wilhelminadorp, Zeeland, Netherlands, 22 May 2020 (*Frank Coenjaerts*)



Utsira, Rogaland, on 27 April was the seventh for Norway. The third **Audouin's Gull** *L. audouinii* for Hungary was reported at Debrecen rubbish dump on 6 May. A third calendar-year at Les Grangettes, Vaud, from 14 May was the 10th for Switzerland; it had been ringed as a chick in Croatia on 17 June 2018 and was seen in Morocco in January 2019. In the Netherlands, 20 nests with eggs of **Caspian Gull** *L. cachinnans* were counted by 28 April at a colony in Flevoland. If accepted, a fourth calendar-year **Glaucous-winged Gull** *L. glaucescens* photographed at Kvaløyvågen, Tromsø, Troms, on 10-11 May will be the second for Norway and the eighth for the WP. A **Little Tern** *Sternula albifrons* in the Lochinvar national park on 14 March may be the first for Zambia, if accepted. After a review, only one record of **Roseate Tern** *Sterna dougallii* is still valid in Norway (on Tisler, Hvaler, Østfold, on 2 June 1984). The **American Royal Tern** *S. maxima* ringed in North Carolina, USA, first seen on Guernsey, Channel Islands, on 5 July 2017 and reported irregularly thereafter on the northern coasts of France, southern coasts of England and in Wales, was again present on Guernsey from 15 December 2019 to at least 19 April. An **African Royal Tern** *S. albididorsalis* was photographed at Porto de Barca, Abrantes, Santarém, Portugal, on 12 May.

**RAPTORS** In the Netherlands, two territorial breeding males and an immature male **Western Osprey** *Pandion haliaetus* showed dispersion distances of 380 km due west (beyond Peterborough, England), 480 km due east and 525 km north-east, respectively. A **Black-winged Kite** *Elanus caeruleus* photographed on Alderney on 16 April and again on 8 May was the second for the Channel Islands (the first was at Noirmont Point, Jersey, on 18 October 2018). In April, other ones were reported in, eg, Belgium (three), Denmark (five, including three on 12 April), Germany (one), the Netherlands (three), Sweden (two) and Switzerland (two). In May, several more were seen, eg, in Belgium and the Netherlands. Thanks to a reintroduction programme in the Picos de Europa, Asturias, Spain, a **Bearded Vulture** *Gypaetus barbatus* chick hatched here for the first time since the species disappeared in 1956. On 11 May, an unmarked immature was photographed over the Flemish borderland between Belgium and France, flying north-east above Forêt de Nieppe, Nord; it was again seen on following days. The first for the Channel Islands was an immature flying over Alderney on 20 May. The sixth **Egyptian Vulture** *Neophron percnopterus* for Belgium was seen at Buissonville, Namur, on 5 May and the seventh was an adult over Lichtervelde, West-Vlaanderen, on 21 May. In Gibraltar, a **Rüppell's Vulture** *Gyps rueppelli* was photographed on 9 May. The wild origin female **Cinereous Vulture** *Aegypius monachus* ('Brínzola') released with a gps tracker in Spain in October 2018 (after it had been taken care of for more than a year), left its area on 22 April 2019 for an epic 3000 km journey over France, Belgium, the Netherlands, Germany, Denmark and Sweden to Norway, where it stayed from May 2019 to March while crossing the Swedish border from time to time. Unfortunately, however, she was found with

a fractured right wing after colliding with a wind farm at Bjerkreim, Rogaland, on 20 March; sadly, the wing had to be amputated. In Denmark, an unringed individual was found dead at Årsdale havn, Bornholm, on 10 April. Two juveniles gps-tagged in summer 2019 in France and Spain reached Africa. The French bird from Aveyron left its nesting site on 24 October and flew quickly south via Spain, Gibraltar and southernmost Algeria to the Sokoto region between Niger and Nigeria, where it arrived on 4 December. The Spanish bird, born in a captive breeding center near Madrid, was released in Burgos on 6 October after which it started to move south from 31 October through Spain, Gibraltar and Algeria to winter in Mauritania; on 28 February, it flew back north to the Souss valley, Morocco, and then zigzagged east to become the species' second record for Tunisia on 27 April. From here, it flew west along the coast of North Africa and across the Strait of Gibraltar to return in Spain on 7 May. A **Greater Spotted Eagle** *Clanga clanga* at Eina, Toten, Oppland, on 15 April was the sixth for Norway. Amongst many rare raptors seen in April-May in Belgium and the Netherlands were more than a handful of **Booted Eagles** *Aquila pennata*. Recently, the Egyptian rarities committee (EORC) accepted the first **Tawny Eagle** *A. rapax* for Egypt photographed at Gabel el Zayt, Al Bahr al Ahmar, on 6 May 2011; a Meinertzhagen specimen from 1924 will be reviewed (<https://tinyurl.com/y8wua-pym>; cf Dutch Birding 40: 188, 2018). The identification of a juvenile photographed at Col de Soulor, Hautes-Pyrénées, on 17 August 2019 has been confirmed by the French rarities committee; if accepted as a wild bird by the Commission de l'Avifaune Française (CAF), it will be the first for France. The fifth **Steppe Eagle** *A. nipalensis* for the Netherlands was a third calendar-year photographed at Hoge Veluwe, Gelderland, and at Veluwemeer, Flevoland, on 13 May. The sixth for the Netherlands was a second calendar-year flying north over northern France and western Belgium before landing to roost in a field near Wolphaartsdijk, Zeeland, in the evening of 21 May. The next morning, it was moving fields and catching prey until 10:23, when it flew off to the north-east, last seen at 11:09 at Volkerakdam, Zuid-Holland. An **Eastern Imperial Eagle** *A. heliaca* at Heule, Kortrijk, West-Vlaanderen, on 12 April was the first for Belgium; probably the same individual was seen in Denmark, first on Møn on 15 April and then over Sjælland the next day. A second calendar-year **Golden Eagle** *A. chrysaetos* over Middelburg, Zeeland, on 20 May was the 10th for the Netherlands since 1980; it was seen in Belgium as well. Two young **Bonelli's Eagles** *A. fasciata* gps-tagged in southern France in Aude and Gard in spring 2019 flew back and forth over France, Belgium, the Netherlands, Denmark and Germany in March-May. The fledgling from Aude had first flown from France to Morocco and even into Algeria in 2019 before flying north to winter in southern Spain, from where it started its northward journey along the Atlantic coast of France; it passed Breskens, Zeeland, on two days before flying to Bakkum, Noord-Holland, on 24 April and across Wadden islands to northern Germany from 25 April. The fledgling from Gard turned up in the Netherlands in late March where it was not seen in the



**278** Abyssinian Roller / Sahelscharrelaar *Coracias abyssinicus*, adult, Las Palmas, Gran Canaria, Canary Islands, 2 May 2020 (Marcos Benito)

**279** Presumed Ehrenberg's Redstart / vermoedelijke Oosterse Gekraagde Roodstaart *Phoenicurus phoenicurus samamiscus*, male, Ghadira, Malta, 18 April 2020 (Raymond Galea)





**280** Possible Green-headed Wagtail / mogelijke Groenkopkwikstaart *Motacilla taivana*, Trelleborg, Skåne, Sweden, 31 March 2020 (*Mattias Ullman*)

**281** Masked Wagtail / Maskerkwikstaart *Motacilla personata*, second calendar-year male, Utsira, Rogaland, Norway, 2 May 2020 (*Torborg Berge*)



field, returned to France before going north-east through Germany to Skagen, Denmark, then moving south-west again. In March-April, no less than 97 **Pallid Harriers** *Circus macrourus* were counted in France, including 70 at Prunete, Corsica (with up to 13 on 28 March). From 14 March to late April alone, 38 were counted at 18 migration watchpoints in the Netherlands. In 2015, one of the highest densities of **White-tailed Eagle** *Haliaeetus albicilla* in the world was found at the Olszanka reserve, Goleniowska forest, north-western Poland; there were nine breeding pairs in an area of 13.5 km<sup>2</sup>, with 300 m as shortest distance between nests (Ornis Pol 61: 14-31, 2020). In Spain, as many as 1470 **Red Kites** *Milvus milvus* were found dead due to poisoning in 1992-2017 (<https://tinyurl.com/y779wlvz>). A recently discovered photograph documents the first **Brahminy Kite** *Haliastur indus* for Iran found by a non-birder at Bahukalat, Sistan and Baluchestan, in mid-October 2013. The species' only other record in the 'greater' WP concerned an adult at Wadi Darbat, Dhofar, Oman, on 20 November 2015; reports from the United Arab Emirates (UAE) (one at Dubai on 12 April 1986 and then from 21 October 1986 to 30 January 1987, and two here on 20-25 December 1986) are currently treated as of 'uncertain origin' ('category D').

**OWLS** After this winter's influx of **Northern Hawk-Owls** *Surnia ulula* in Denmark with at least 12 individuals, the first breeding attempt occurred by a pair in Sjælland in April. In Belgium, a **Eurasian Pygmy Owl** *Glaucidium passerinum* flew against a window but was unscathed at Kapelle-op-den-Bos, Vlaams-Brabant, on 25 March. The first confirmed breeding of **Tengmalm's Owl** *Aegolius funereus* for Turkey concerned a pair in a nest hole in Bolu province from 25 April onwards. In early May, a **Snowy Owl** *Bubo scandiacus* was reported at St Just, Cornwall, England. The identification of the possibly first **Eurasian Eagle-Owl** *Bubo hispanus* for Morocco, photographed but not singing and in wet plumage near Al Hoceima on 16 February, has been questioned as it was thought that it actually concerned a Pharaoh Eagle-Owl *B. ascalaphus* (contra Dutch Birding 42: 129, 2020, Go-South Bull 17: 22-23, 2020; Magnus Robb in litt). This spring, an adult **Turkish Fish Owl** *B. semenowi* photographed outside the known breeding area and near the border of Syria at Samandağ'a, Hatay, Turkey, was shot dead later.

**BEE-EATERS TO FALCONS** The first **Blue-cheeked Bee-eater** *Merops persicus* for Hungary was photographed at Dabas, Pest, on 23 May. The second **Abyssinian Roller** *Coracias abyssinicus* for the Canary Islands at Las Palmas, Gran Canaria, from 14 January remained until at least 18 May. Recently, an adult **Broad-billed Roller** *Eurystomus glaucurus* found dead at Adal Dieb, Gebel Elba, on 30 October 2010 has been accepted by the EORC as the first for Egypt (<https://tinyurl.com/y8wuapym>); previous WP records concerned two individuals collected in the Cape Verde Islands on 22 November 1897 and on 28 April 1924 and one at Karmia, Israel, on 12-18 September 2019 (cf Dutch Birding 41: 352-353, 2019). An adult male **Lesser Kestrel** *Falco naumanni* stayed on St Mary's,

Scilly, from 14 March to at least 2 May; two were reported at Graz and Thal, Steiermark, Austria, on 7 and 11 April, respectively. A female **Amur Falcon** *F. amurensis* with a gps-transmitter left South Africa on 21 April and flew across the Arabian Sea to arrive at Mizoram, India, on 26 April, covering c 4800 km in five days (<https://tinyurl.com/y9e92k8v>). If accepted, a **Lanner Falcon** *F. biarmicus* at Cape Drepanum on 29 February will be the fourth for Cyprus.

**SHRIKES TO CROWS** A female **Brown Shrike** *Lanius cristatus* stayed at Flamborough, East Yorkshire, England, on 12-14 May. In August 2018, a mixed pair of a male **Red-backed Shrike** *L. collurio* and a female **Woodchat Shrike** *L. senator* raised at least three fledglings in Bern, Switzerland; Woodchat last bred in Switzerland in 2009 (Ornithol Beob 117: 66-70, 2020). The first **Bay-backed Shrike** *L. vittatus* for Bahrain was photographed at Buri on 18 April. Recently, a **Great Grey Shrike** *L. excubitor excubitor* at Agios Theodoros, Larnaca, on 10 February 2018 has been accepted as the first for Cyprus (Sandgrouse 42: 143-154, 2020). Two **drongos** *Dicrurus* were reported at Qatbit, Oman, on 15 November 2019 (Sandgrouse 42: 162-184, 2020). In Hormozgan, Iran, an **Ashy Drongo** *D. leucophaeus* was photographed at Jahad park, Bandar Abbas, on 12 December 2019, and two were found at Sararud, Minab, on 12 February (cf Dutch Birding 41: 23-28, 2019). The second **Indian Paradise Flycatcher** *Terpsiphone paradisi* for the UAE (and the WP) at Mushrif Palace Gardens, Abu Dhabi, from 30 December 2019 remained until at least 23 April. In Spain, **Pied Crows** *Corvus albus* were seen at Edificio Cariño, Ceuta, on 8 April and at Ferrol, A Coruña, on 13 May. The one staying for almost two years first in Britain (since 13 June 2018) and then in the Netherlands (from 22 May 2019) was last seen at Leeuwarden, Friesland, on 20 March after which it was possibly reported on Texel, Noord-Holland, on 23 March.

**TITS TO REEDLINGS** In Finland, an **Azure Tit** *Cyanistes cyanus* turned up at Lammi, Hämeenlinna, on 2 April. The first **Eurasian Blue Tit** *C. caeruleus* for Cyprus was photographed at Cape Kormakitis on 28 April. The first **Eurasian Blue** and the second **Long-tailed Tit** *Aegithalos caudatus* for Uzbekistan were found in Karaqalpakstan on 7 November 2019 (Sandgrouse 42: 162-184, 2020). Recently, at least five **Bearded Reedlings** *Panurus biarmicus* at Manzala lake on 31 December 1989 have been accepted by the EORC as the first, and so far only record for Egypt (cf Dutch Birding 17: 159-160, 1995).

**LARKS TO MARTINS** **Temminck's Larks** *Eremophila bilopha* at Ain Al-Fayda from 18 February (found dead on 3 April) and Green Mubazzarah on 25 April concerned the second and third record for the UAE. The first **Greater Short-toed Lark** *Calandrella brachydactyla* for Latvia was found at Riva, Pvilosta, on 24-25 April. In Cyprus, a **Dunn's Lark** *Eremalauda dunnii dunnii/eremodites* was photographed near Cape Greco on 6-8 April; the previous one (probably African Dunn's Lark *E. d. dunnii*) occurred in April 2007 (cf Sandgrouse 40: 17-24, 2018). In



**282** Black-faced Bunting / Maskergors *Emberiza spodocephala*, male, Jurmo, Korppoo, Finland, 10 May 2020  
(Pekka Alho)

**283** Song Sparrow / Zanggors *Melospiza melodia*, Fair Isle, Shetland, Scotland, 9 April 2020  
(David Parnaby/Fair Isle Bird Observatory)



Israel, an influx of **Arabian Dunn's Lark** *E d eremodites* was noted in April, with many breeding pairs reported in the Negev and the Arava valley and even a few birds on the Mediterranean coast. A **Banded Martin** *Phedina cincta* on Elephantine island, Aswan, on 15 November 1988 has now been accepted as the first for Egypt and the WP 'sensu BWP' (cf Sandgrouse 12: 55-56, 1990); in the 'greater' WP, there have been two previous ones, at Bajil, Yemen, on 12 March 1982 and near Riyad, Saudi Arabia, on 3 October 1996 (Sandgrouse 4: 1-36, 1982; 20: 55, 1998), while one in the UAE has not been accepted (contra Dutch Birding 38: 331, 2016).

LEAF WARBLERS TO REED WARBLERS A **Green Warbler** *Phylloscopus nitidus* singing at Skagen on 27 May was the second for Denmark. On 17 May, a **Pallas's Leaf Warbler** *P proregulus* turned up on Helgoland, Schleswig-Holstein, Germany. In Italy, 'unseasonal' **Yellow-browed Warblers** *P inornatus* were found near Cirò Marina, Calabria, on 19 April and on Ventotene on 21 April. The second **Radde's Warbler** *P schwarzi* for the Channel Islands was trapped and ringed on Alderney on 3 May. A singing **Eastern Bonelli's Warbler** *P orientalis* photographed near Dobrooleksandrivka, Odessa, on 18 April was the second for Ukraine. An **Iberian Chiffchaff** *P ibericus* at Andrea Corso's garden at Siracusa, Sicily, on 17 April was the eighth or ninth for Italy (four of these in his garden!). Until mid-May, both in Belgium and the Netherlands at least three were found singing. A molecular analysis of the **lesser whitethroat** *Sylvia althaea/curruca* complex showed that three taxa occur in Iran: *althaea* breeds at Kopet Dagh (north-eastern Iran) and at Kerman mountains, east of the Zagros mountains (south-eastern Iran); *curruca* breeds from central Zagros to north-western Iran; and *halimodendri* is a migrant and winterer in southern Iran. The contentious taxon *zagrosiensis* from the Zagros mountains was deemed to be too difficult to recognize (<https://tinyurl.com/yadwuctv>). A male **Sardinian Warbler** *S melanocephala* at Spitzerberg, Niederösterreich, on 18 April was the fourth for Austria, and one photographed at Saghalvasho on 1 May was the fourth for Georgia. Two **Eastern Orphean Warblers** *S hortensis* near Bishkek on 1 March 2019 constituted the first record for Kyrgyzstan (Sandgrouse 42: 162-184, 2020). The fourth **Moustached Warbler** *Acrocephalus melanopogon* for Poland was singing at Świerklaniec reservoir, Silesia, on 13-16 April.

STARLINGS TO STONECHATS In Iran, **Brahminy Starlings** *Sturnia pagodarum* were found at Siraf, Bushehr, on 27 March and at Bandar-e Jask, Hormozgan, on 28 April. If accepted, a **Tristram's Starling** *Onychognathus tristramii* photographed at Al Ain, Abu Dhabi, on 9 March may be the first for the UAE. The seventh **Dusky Thrush** *Turdus eunomus* for Belgium at De Liereman, Turnhout, Antwerpen, from 1 January was last seen on 31 March and the ninth for Norway at Vikten, Flakstadøya, Nordland, from 10 January was last seen on 11 April. In England, the wintering **Black-throated Thrush** *T atrogularis* at Grimsby, Lincolnshire, remained until 2 April, and another was seen at Fenwick, Northumberland, on 8 May.

In the Netherlands, a female stayed at Utrecht, Utrecht, from 31 March to 3 April. The fifth **White-spotted Bluethroat** *Luscinia svecica cyaneocula* for Norway was found on Utsira on 18 April. If accepted, a second calendar-year male **Semicollared Flycatcher** *Ficedula semitorquata* trapped and ringed at Wijlerberg, Beek, Gelderland, on 21 May will be the first for the Netherlands. The first **Collared Flycatcher** *F albicollis* for the Faeroes was an adult male photographed at Porkeri, Suðuroy, on 25 April. The second **European Pied Flycatcher** *F hypoleuca* for the UAE was a male at Umm al-Emarat park on 6 May 2019 (Sandgrouse 42: 143-154, 2020). A presumed **Ehrenberg's Redstart** *Phoenicurus phoenicurus samamisticus* (a male) trapped and ringed at Ghadira on 18 April was the first for Malta. The third **Common Rock Thrush** *Monticola saxatilis* for the Canary Islands turned up on Fuerteventura on 24 April. A male **Pied Bush Chat** *Saxicola caprata* near Bishkek on 26 September 2019 was the first for Kyrgyzstan (Sandgrouse 42: 162-184, 2020). The fifth **Siberian Stonechat** *S maurus* for Austria was found at Seewinkel, Burgenland, on 4 April. If accepted, a male **Caspian Stonechat** *S m hemprichii* photographed at Dnepra-Sozhski nature reserve, Loeu, on 21 April will be the first for Belarus and one at Lublin, Lubelskie, on 16 May the first for Poland. A first-summer male trapped at Halias, Hanko, on 19 May was the third for Finland.

WHEATEARS TO PIPITS The second **Seebohm's Wheatear** *Oenanthe seebohmi* for Italy was a male photographed at Campo Imperatore, Abruzzo, on 14 May. A male **Eastern Black-eared Wheatear** *O melanoleuca* trapped at Merzouga, Tafilalet, on 8 March was the fifth for Morocco; the previous four were reported in the 1950s (three between 29 April and 18 May, and one in August). The second **Pied Wheatear** *O pleschanka* for Austria was a male mating with a female Northern Wheatear *O oenanthe* at Weiden am See, Burgenland, from 26 April into May. The third **White-crowned Wheatear** *O leucopyga* for Qatar was found at Irikaya farm on 22 December 2019 (Sandgrouse 42: 143-154, 2020). The fourth and fifth for Iran were photographed at Taleghan, Alborz mountains and on Kish, Hormozgan, on 22 April. The third **Black-headed Wagtail** *Motacilla feldegg* for the Netherlands was a male photographed and sound-recorded at Lentevreugd, Zuid-Holland, on 22-23 April. The first **Eastern Yellow Wagtail** *M tschutschensis* ('sensu lato') for Malta from 21 December 2019 remained at Salina until 18 April. If accepted, a possible **Green-headed Wagtail** *M taivana* wintering at Trelleborg, Skåne, until at least 10 April may be the first for Sweden and the WP 'sensu BWP' (there are five records in Oman). A second calendar-year male **Masked Wagtail** *M personata* first at Hälleviks kås, Stenshuvud, Skåne, on 12-14 April then stayed on Utsira, Norway, from 29 April to 4 May. If accepted, an **Amur Wagtail** *M leucopsis* from at least 4 to 31 May at Rockanje, Westvoorne, will be the first for the Netherlands and the fourth for the WP (previous ones were in Oman in February 2005, England in April 2005, Norway in November 2008 and Finland in November-December 2015). The eighth **Blyth's Pipit** *Anthus godlewskii* for Israel was seen at Hazook dunes, Tel-Aviv, on 28 April. In Belgium, one



**284** Masked Wagtail / Maskerkwikstaart *Motacilla personata*, second calendar-year male, Hälleviks kås, Stenshuvud, Skåne, Sweden, 12 April 2020 (David Erterius)

stayed at Drongen, Oost-Vlaanderen, from 24 March to 6 April. An **Olive-backed Pipit** *A hodgsoni* found as a window victim on Vágar on 1 May was the sixth for the Faeroes.

FINCHES TO AMERICAN WARBLERS The fifth **Asian Crimson-winged Finch** *Rhodopechys sanguineus* for Cyprus was seen at Karpasia on 16 March. **Trumpeter Finches** *Bucanetes githagineus* were reported, eg, at Majjistral, Malta, on 5-20 March; on Pantelleria, Sicily, Italy, on 5 May; at Espichel Cape, Setúbal, Portugal, on 9 May (fifth record); and at Shabla, Dobrich, Bulgaria, on 14 May (second). A **Citril Finch** *Carduelis citrinella* trapped near Verviers, Liège, on 17 April was (already) the 16th for Belgium. The fifth **Song Sparrow** *Melospiza melodia* for Fair Isle and Scotland was present on 9-11 April. On 15 May, a **White-crowned Sparrow** *Zonotrichia leucophrys* was found on Fetlar, Shetland, Scotland. If accepted, a male photographed (only once) by a non-birder inland at Hunsel, Limburg, on 17 May will be the first for the Netherlands (a male at Spaarndam, Noord-Holland, from December 1981 to February 1982 was recently rejected after review because the only photograph showed a damaged toe, now regarded as evidence of captive origin). A male **Cirl Bunting** *Emberiza cirlus* was singing at Zedelgem, West-Vlaanderen, Belgium, on 21 April. In June 2019, a large population of **Yellow-breasted Bunting** *E aureola* was discovered in the Tunka valley near Baikal lake, Russia, with an average density of 30 individuals per km<sup>2</sup> and a total population estimate



**285** Moustached Warbler / Zwartkoprietzanger *Acrocephalus melanopogon*, Świerklaniec reservoir, Silesia, Poland, 16 April 2020 (Krzysztof Belik)

between 3100 and 13 100 (Baikal Zool J 26 (3): 79-82, 2019). The second **Black-faced Bunting** *E spodocephala* for Finland was trapped at Jurmo, Korppoo, on 10 May (the first was on 2 November 1981). A **Black-and-white Warbler** *Mniotilta varia* photographed at Reynishverfi on 22-23 May was the third for Iceland.

For a number of reports Birdwatch, British Birds, Global Rare Bird Alert Facebook, Go-South Bulletin, Sovonnieuws, www.birdguides.com, www.clanga.com, www.dutchavifauna.nl, www.magornitho.org, www.rarebirdalert.co.uk, www.rarebirdspain.net, www.tarsiger.com and www.waarneming.nl were consulted. We wish to thank Amirhossein Aghaei, Pekka Alho, Shachar Alterman, Ana Alves, Mohamed Amezian, Bart Augustijns, Krzysztof Belik, Marcos Benito, Torborg Berge, Patrick Bergier, David Bigas, Paul Bradbeer, Fredrik Broms, Bert de Bruin, Mika Bruun, José Luis Copete, Magnus Corell, Andrea Corso, Philippe Dubois, Nils van Duivendijk, Enno Ebels, David Erterius, Kaspars Funts, Raymond Galea, Eduardo Garcia-del-Rey, Jean-Louis Grangé, Isak Grimsby, Ricard Gutiérrez, Remco Hofland, Marc Illa, Josh Jones, Albert de Jong, Zbigniew Kajzer, Johannes Kamp, Abolghasem Khaleghizadeh, Leander Khil, Howard King, Bence Kókay, Yann Kolbeinsson, Jiří Kött, Richard Kvetko, Hans Larsson, André van Loon, Lionel Maumary, Giuseppe Minuta, Geir Mobakken, Killian Mullarney, Gert Ottens, David Parnaby, Joe Pender, Yoav Perlman, Sebastian Poirier, René Pop, Nikos Probonas, Abdeljebbar Qninba, Colin Richardson, Magnus Robb, Thorsten Runge, Michael Sammut, Jiri Sirek, Rasmus Strack, Edd Stubbs, Jan Studecký, Peter Symens, Ehsan Talebi, Mattias Ullman, André Vieira, Sam Viles, Roland van der Vliet and Emin Yögürtcuoğlu for their help in compiling this review.

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# Recente meldingen

Dit overzicht van recente meldingen van zeldzame en interessante vogels in Nederland beslaat voornamelijk de periode **maart-april 2020**. De vermelde gevallen zijn deels niet geverifieerd en het overzicht is niet volledig. Daarbij komt dat er beperkingen golden ten aanzien van de informatievoorziening over zeldzame vogels, als gevolg van de maatregelen rond het coronavirus.

GANZEN EN EENDEN **Witbuirokrotganzen** *Branta hrota* werden gemeld uit 39 uurhokken, in beduidend lagere aantallen dan in de vorige periode. Het maximum op één plek betrof vijf bij Koehool, Friesland, op 1 maart. Er werden 16 trekkers waargenomen vanaf telposten, waaronder een groep van 10 op 27 april langs Castricum aan Zee, Noord-Holland. Vermeldenswaard is het familie-groepje **Witbuirokrotganzen x Rotgans** *B hrota x bernicla* met drie hybride jongen dat zich ophield van 6 tot 15 april bij De Schans op Texel, Noord-Holland. **Zwarte Rotganzen** *B nigricans* werden gezien in ten minste 36 uurhokken. De hoogste aantallen (maximaal twee bij elkaar) kwamen van Texel en Wieringen, Noord-Holland. De familie **Zwarte Rotgans x Rotgans** *B nigricans x bernicla* met drie hybride jongen die overwinterde in de omgeving van Burghsluis, Zeeland, werd voor het laatst gemeld op 19 april. **Roodhalsganzen** *B ruficollis* werden vooral in de Delta en in het noorden gezien. Daar zaten ook de grootste aantallen, zoals maximaal zeven op Ameland, Friesland, en vier bij Ternaard, Friesland. De ongeringde **Ross' Gans** *Anser rossii* van de omgeving van Schiedam, Zuid-Holland, bleef de gehele periode. **Dwergganzen** *A erythropus* werden tot respectievelijk 7 en 9 maart waargenomen op de bekende pleisterplaatsen Oudeland van Strijen, Zuid-Holland, en Petten, Noord-Holland. Daarbuiten werden verspreid minimaal drie exemplaren waargenomen in polders in Friesland. Opmerkelijk was de trekker die op 12 april met Grauwe Ganzen *A anser* meevloog langs telpost Kustweg, Lauwersmeer, Groningen. Op 14 april was er een ongeringde bij Oost-Maerland, Limburg, op dezelfde locatie als in 2018. Een mannetje **Koningsieder** *Somateria spectabilis* werd op 30 maart ontdekt op de Noordzee bij Paal 12, Texel. In april werd hij op verschillende plekken rondom Texel gezien. Het betrof waarschijnlijk dezelfde als die in 2018 bij Paal 12 en die van vorig jaar op De Richel, Vlieland, Friesland. Ook in deze periode werd een hybride **Nonnetje x Brilduiker** *Mergellus albellus x Bucephala clangula* gezien: een mannetje op de WML-plas bij Heel, Limburg, van 31 maart tot 3 april. Het ongeringde mannetje **Kokardezaagbek** *Lophodytes cucullatus* van de Rottemeren, Bleiswijk, Zuid-Holland, bleef tot 1 maart en werd daarna bij Ameide, Utrecht, waargenomen van 12 maart tot 2 april, optrekend met een vrouwtje **Witoogend** *Aythya nyroca*. Een hybride **Ringsnaveleend x Kuifeend** *A collaris x fuligula* op 25 maart bij Stadskanaal, Groningen, is al geaccepteerd als 11e geval. Het mannetje **Ringsnaveleend** dat voor de vierde winter op rij verbleef in Appingedam, Groningen, werd voor het laatst gemeld op 22 april. Op

14 maart werd een exemplaar aangetroffen in de Dintelhaven in Rotterdam, Zuid-Holland, waarschijnlijk de vogel die daar begin 2019 ook werd gezien. Van 25 april tot in mei zwom een exemplaar op de Krabbeplass bij Vlaardingen, Zuid-Holland, naar alle waarschijnlijkheid hetzelfde mannetje als dat van eind 2019 en wellicht ook als dat van de Dintelhaven. Hybride mannetjes **Witoogend x Kuifeend** *A nyroca x fuligula* zwommen op 3 maart op de Reeuwijkse Plassen bij Reeuwijk, Zuid-Holland; op 29 en 30 maart op de Zevenhuizerplas bij Zevenhuizen, Zuid-Holland; en op 28 en 29 april, samen met een zuiver vrouwtje **Witoogend** bij Schoonhoven en Bergambacht, Zuid-Holland. Van 11 tot 29 april werd een **Kleine Topper** *A affinis* gezien op het Nulderanauw, Nijkerk, Gelderland. Het betrof het eerste vrouwtje ooit. Daarnaast zwom op 13 april een mannetje bij Biddinghuizen, Flevoland. Een lastig te determineren hybride **Kleine Topper x Topper** *A affinis x marila* werd gefotografeerd op 4 en 26 april in de Dijkwielen in de Wieringermeer, Noord-Holland. Op 5 april werden 1701 **Slob-eenden** *Spatula clypeata* geteld langs telpost Castricum aan Zee. Dit betekent een verbetering van het oude nationale record van 1555 op 11 april 2016 van telpost Camperduin, Noord-Holland. De **Blauwvleugelgaling** *S discors* die tot ten minste 15 maart bij Maastricht, Limburg, verbleef, was een geliefd onderwerp van vele discussies maar werd toch op status afgewezen door de CDNA. Op 17 april was een mannetje aanwezig in de Sophiapolder bij Oostburg, Zeeland. De **Amerikaanse Smient** *Mareca americana* die al langere tijd verbleef bij Harlingen, Friesland, werd tot 20 maart gemeld; op 29 april werd hij teruggevonden in de Workumerwaard, Friesland. De vogel bij Zwolle, Overijssel, werd nog gemeld tot 16 maart, en verbleef daarna van 24 tot 26 maart te Hattem, Gelderland, om vervolgens op 3 april weer bij Zwolle op te duiken. Daarnaast werd op 21 maart een ander exemplaar gevonden op de Kraaijenbergse Plassen bij Cuijk, Noord-Brabant.

DUIVEN EN GIERZWALUWEN De **Meenatortel** *Streptopelia orientalis meena* van Sneek, Friesland, bleef tot 11 maart. De volgende diende zich met terugwerkende kracht alweer aan toen achteraf bleek dat een exemplaar van 14 februari tot 31 maart vertoefde in een woonwijk in Alkmaar, Noord-Holland. Een **Alpengierzwaluw** *Tachymarptis melba* vloog op 6 april zuidwaarts over Berkheide bij Katwijk, Zuid-Holland.

RALLEN TOT IBISSEN **Kleine Waterhoenders** *Zapornia parva* werden waargenomen op 26 april bij Winterswijk, Gelderland, en vanaf 27 april in de Weerribben, Overijssel. **Kleinste Waterhoenders** *Z pusilla* werden al gemeld vanaf 6 april op zes locaties. De in Duitsland geziende **Grote Trap** *Otis tarda* van Oostvoorne, Zuid-Holland, hield het hier na 1 april voor gezien. Waarschijnlijk dezelfde vogel (met zender) is rond 13 april bij Heerenveen, Friesland, gefotografeerd; op de weg terug?



**286** Meenatortel / Rufous Turtle Dove *Streptopelia orientalis meena*, Alkmaar, Noord-Holland, 20 februari 2020  
(Ruud E Brouwer)

**287** Ijsduiker / Common Loon *Gavia immer*, eerste-winter, Amsterdam, Noord-Holland, 18 maart 2020  
(William Price)





**288** Roodhalsganzen / Red-breasted Geese *Branta ruficollis*, Paesens, Friesland, 13 maart 2020  
(Martijn Bot)

**289** Ross' Gans / Ross's Goose *Anser rossii*, adult, Schiedam, Zuid-Holland, 6 maart 2020  
(Hans Overduin)



## Recente meldingen

De Delta bleef favoriet voor **Ijsduikers** *Gavia immer*, wat resulteerde in de grootste groep ooit bijeen, namelijk zeven op 12 april op zee bij Ouddorp, Zuid-Holland. Ook op andere plekken in de omgeving zwommen meerdere. In het binnenland bleven de exemplaren van De Nieuwe Meer bij Amsterdam, Noord-Holland, en van Bemmelerland, nog tot 20 maart. Nieuwe doken op in het Nijkerkernauw, Gelderland, van 7 tot 21 maart; in de Rhederlaag bij Giesbeek, Gelderland, van 14 tot 16 maart; en in de Millingerwaard bij Millingen, Gelderland, op 19 maart. Er werd één trekker gemeld: op 23 maart langs telpost IJmuiden aan Zee, Noord-Holland. Een onvolwassen **Geelsnavelduiker** *G. adamsii* gevonden op 5 april ver op de Noordzee bij de Brouwersdam, Zuid-Holland, werd nog tot 11 april gezien. Indien aanvaard is dit het 41e geval en de op één na laatste in het 'winterhaljaar'. In maart werden al zeven **Zwarte Ooievaars** *Ciconia nigra* gemeld. In totaal kwamen deze hele periode waarnemingen uit 67 uurhokken (76 exemplaren). De **Roze Pelikaan** *Pelecanus onocrotalus* hield de Ooievaars *C. ciconia* in het Reestdal, Drenthe/Overijssel, de gehele periode gezelschap. Ze bleken nogal aan elkaar gehecht want op 18 april vloog de pelikaan mee in een groep van 15 Ooievaars over Havelte, Drenthe. Leuk is de terugmelding op 7 maart in Valloire-sur-Cisse, Frankrijk, van een op 7 april 2019 in Artis, Amsterdam, Noord-Holland, geringde **Kwak** *Nycticorax nycticorax*. De vogel was 12 dagen oud toen hij werd geringd en heeft zich daarna ruim 600 kilometer verplaatst. **Zwarte Ibissen** *Plegadis falcinellus* werden op acht plekken aangetroffen.

**STELTLOPERS EN ALKEN** Een hele vroege **Griël** *Burhinus oedipnemos* werd op 14 maart opgestoten op het strand ter hoogte van de Kennemerduinen, Bloemendaal aan Zee, Noord-Holland. Daarna volgden exemplaren op 7 april bij Numansdorp, Zuid-Holland; op 11 april in Berkheide bij Katwijk; en op 28 en 29 april bij Franeker, Friesland. Op 19 april werd een nieuw landelijk trekrecord van **Regenwulp** *Numenius phaeopus* vastgesteld op telpost Bloemendaal aan Zee, met 1344 exemplaren. Daarmee bleef men telpost De Vulkaan, Den Haag, Zuid-Holland, waar die dag 1251 werden geteld, net voor. Het vorige hoogste aantal was 906 van alweer 18 april 1992 op telpost Camperduin. Op 1 en 15 maart werden **Rosse Franjepoten** *Phalaropus fulicarius* gezien op het wad in Friesland, respectievelijk bij Holwerd en Paesens. Daarnaast vloog op 9 maart een exemplaar zuidwaarts langs telpost Camperduin. De eerste **Poelruiter** *Tringa stagnatilis* van het jaar liep op 12 april op Schiermonnikoog, Friesland. Hierna waren er nog zes waarnemingen elders. Een adulte **Grote Grijs Snip** *Limnodromus scolopaceus* in zomerkleed foerageerde op 8 april in Polder Oude en Nieuwe Uitslag van Putten bij Spijkenisse, Zuid-Holland. Een **Papegaaiduiker** *Fratercula arctica* vloog op 4 april dichtbij langs bij Paal 15, Texel. Andere waarnemingen werden vanuit vliegtuigjes gedaan op het Continentaal Plat.

**MEEUWEN EN STERNS** De eerste-winter **Vorkstaartmeeuw** *Xema sabini* van de omgeving Koehool werd voor het laatst gemeld op 24 maart. De laatste 'piep-soort' voor de

'intelligente lockdown' betrof een derde-kalenderjaar **Franklins Meeuw** *Larus pipixcan* die op 16 en 17 maart tussen Benthuisen en Zoetermeer, Zuid-Holland, rondhing. Deze is reeds aanvaard als het 13e geval. Op telpost Kamperhoek, Flevoland, werd het record **Pontische Meeuw** *L. cachinnans* op 27 maart met 70 exemplaren weer iets scherper gezet. De vijf hoogste aantallen komen ook alle van deze post, vanaf april 2019. De kolonie in Flevoland telde al bijna 20 broedparen. De adulte **Kleine Burgemeester** *L. glaucoides* van Amsterdam, Noord-Holland, bleef tot 26 maart en de mogelijke vijfde-kalenderjaar **Kumliens Meeuw** *L. g. kumlieni* van Julianadorp, Noord-Holland, tot 4 april. Verder waren er Kleine Burgemeesters op 6 maart (tweede-kalenderjaar) op het strand bij Ouddorp, Zuid-Holland, en één overvliegend bij Noordwijk, Zuid-Holland; op 13 en 15 maart eveneens een tweede-kalenderjaar op het strand tussen Paal 15 en 16, Texel; op 27 maart een adulte noordwaarts vliegend bij de Zuidpier, IJmuiden, Noord-Holland; op 11 april weer een tweede-kalenderjaar over telpost Wanteskuip, Noord-Beveland, Zeeland; en op 16 april nog een tweede-kalenderjaar langs telpost Pettemer Zeeuwing, Petten, Noord-Holland. De drie tweede-winter **Grote Burgemeesters** *L. hyperboreus* waren ook deze periode nog aanwezig. De vogel in de haven van Vlissingen, Zeeland, vertoefde daar tot in ieder geval 24 april. De exemplaren van Ferwert (Ferwerd), Friesland, en op de zuidkant van Texel, werden gemeld tot 15 maart respectievelijk 30 april. Nieuwe eerste-winters werden gezien op 16 maart bij de Hondsbossche Zeeuwing, Noord-Holland; op 5 april boven Alkmaar; en op 12 april bij Westkapelle, Zeeland. Tenslotte noteerden zeetrekters er nog vijf op hun telposten. Het was een goede periode voor **Lachstern** *Gelochelidon nilotica* met maar liefst 19 op telposten (waaronder waarschijnlijk enkele dubbeltellingen), plus vijf overige waarnemingen. In de afgelopen 10 jaar was alleen de periode maart-april 2011 beter, toen er 22 werden geteld. In de tussenliggende jaren lag het aantal tussen nul en vier. In totaal 23 **Reuzensterms** *Hydroprogne caspia* werden waargenomen op telposten; er waren deze periode waarnemingen uit 58 uurhokken, met een maximum van 13 op 10 april in de Workumerwaard. De eerste **Witwangstern** *Chlidonias hybrida* keerde op 12 april terug in het broedgebied Zuidlaardermeer, Groningen. Vanaf 15 april was een exemplaar aanwezig in De Onlanden, Drenthe. Andere plekken waar deze soort werd gezien betroffen op 23 april telpost De Gorzen, Ridderkerk, Zuid-Holland; telpost Kinderdijk, Zuid-Holland; en Alblasserdam, Zuid-Holland; en op 24 april bij Leeuwarden, Friesland. Het landelijk trekrecord van 'noordse dief' (Visdief of Noordse Stern *Sterna hirundo/paradisaea*) werd op 26 april op telpost Bloemendaal aan Zee op 13 637 gezet, een fractie meer dan de 13 585 van 30 april 1995 van telpost Scheveningen, Zuid-Holland.

**ROOFVOGELS** **Grijze Vrouwen** *Elanus caeruleus* gingen gewoon door met de opwaartse trend van de laatste jaren: op 20 maart kortstondig ter plaatse in het Bargerveen, Drenthe; op 5 april naar zuid vliegend over telpost Wanteskuip en over Middelburg, Zeeland; en op 13 april



**290** Alpengierzwaluw / Alpine Swift *Tachymartia melba*, Berkheide, Katwijk, Zuid-Holland, 6 april 2020 (Ed Schouten) **291** Zwarte Wouw / Black Kite *Milvus migrans*, Berkheide, Wassenaar, Zuid-Holland, 6 april 2020 (René van Rossum) **292** Steppiekiekendief / Pallid Harrier *Circus macrourus*, adult vrouwtje, Eierland, Texel, Noord-Holland, 24 april 2020 (Jeroen de Bruijn)





**293** Havikarend / Bonelli's Eagle *Aquila fasciata*, tweede-kalenderjaar, De Koog, Texel, Noord-Holland, 24 april 2020 (Jeroen de Bruijn) **294** Roodpootvalk / Red-footed Falcon *Falco vespertinus*, adult mannetje, Wanteskuup, Noord-Beveland, Zeeland, 23 april 2020 (Lennart Verheuvell) **295** Grijsze Wouw / Black-winged Kite *Elanus caeruleus*, Colijnsplaat, Noord-Beveland, Zeeland, 5 april 2020 (Huibert van den Bos)





**296** Balkankwikstaart / Black-headed Wagtail *Motacilla feldegg*, mannetje, Lentevreugd, Wassenaar, Zuid-Holland, 23 april 2020 (*Hans Overduin*)

**297** Citroenkwikstaart / Citrine Wagtail *Motacilla citreola*, tweede-kalenderjaar mannetje, Amsterdamse Waterleidingduinen, Zuid-Holland, 16 april 2020 (*Kees van Dommele*)





**298** Franklins Meeuw / Franklin's Gull *Larus pipixcan*, derde-kalenderjaar, Benthuizen, Zuid-Holland, 16 maart 2020 (Mark Zevenbergen) **299** Kokardezaagbek / Hooded Merganser *Lophodytes cucullatus*, adult mannetje, Ameide, Utrecht, 30 maart 2020 (Albert Molenaar) **300** Zwartkeellijster / Black-throated Thrush *Turdus atrogularis*, tweede-kalenderjaar vrouwtje, Utrecht-Hoograven, Utrecht, 2 april 2020 (Bram Rijkse) **301** Witkopgors / Pine Bunting *Emberiza leucocephalos*, mannetje, Zeddam, Gelderland, 30 maart 2020 (Stef Veldkamp)

naar west vliegend bij Vlissingen. De eerste **Slangenarend** *Circus gallicus* van het jaar werd op 9 en 10 april gezien boven het Deelensche Veld op de Hoge Veluwe, Gelderland. Op 12 april was er een waarneming bij De Haar, Drenthe; op 24 april trok een exemplaar over telpost De Hamert, Limburg; op 25 april was er één in het Dwingelderveld, Drenthe; en op 29 april in het Fochteloërveen, Friesland. Al op 17 april vlogen twee **Vale Gieren** *Cypselurus fulvus* over Almere, Flevoland. Naast enkele meldingen van mogelijke **Dwergarenden** *Aquila pennata* zonder documentatie werd een exemplaar gefotografeerd boven Haarlem, Noord-Holland, op 21 april. Misschien wel hét ornithologische hoogtepunt van deze periode waren de twee tweede-kalenderjaar **Havikarenden** *A. fasciata* die ons land doorkruisten. Ze waren als nestjong in 2019 op twee nesten in Zuidoost-Frankrijk geringd en gezenderd. De eerste bleek compleet onopgemerkt door het land te zijn gevlogen en hing eind maart enkele dagen rond in Friesland. Daarna is hij, via zowel België als

Frankrijk, naar Duitsland en Denemarken gevlogen, waar hij wél in het veld is waargenomen. De tweede werd op 17 april ontdekt bij Sint Kruis, Zeeland, en vloog kort na de ontdekking hard richting het zuiden, naar België. Zes dagen later, op 23 april, werd hij opnieuw opgemerkt toen hij langs telpost Breskens, Zeeland, vloog. Vanuit Frankrijk kwam het bericht dat hij diezelfde avond was gepeild in het Noordhollands Duinreservaat bij Bakkum, Noord-Holland, waar hij de volgende ochtend, op 24 april, door enkele gelukkigen werd waargenomen toen hij noordwaarts wegvloog. Daarna werd hij op enkele plekken in Noord-Holland gezien om uiteindelijk het Marsdiep over te steken naar Texel. Na in het bos bij De Koog overnacht te hebben, zette hij zijn weg op 25 april voort en werd hij nog opgepikt op Ameland. Uiteindelijk bereikte ook deze vogel vervolgens zowel Duitsland als Denemarken. Het waren het vierde en vijfde geval ooit, waarbij moet worden vermeld dat de laatste alweer 18 jaar geleden was en de laatste twitchbare zelfs 25 jaar! Al



op 14 maart werd de eerste **Steppiekiekendief** *Circus macrourus* van het voorjaar gezien bij Anderen, Drenthe. Er volgden daarna nog 37 exemplaren op 18 telposten. Ter vergelijking: er werden in totaal 42 **Grauwe Kiekendieven** *C pygargus* gemeld van de telposten. Laatstgenoemde soort was met waarnemingen in 104 uurhokken in de bestanden van [www.waarneming.nl](http://www.waarneming.nl) wel stukken algemener dan Steppiekiekendief met 47 uurhokken. Op telposten werden in totaal 331 **Rode Wouwen** *Milvus milvus* vastgesteld, met een maximum van 35 over telpost Karstraat, Wittern, Limburg. Daarnaast registreerden trektellers 220 **Zwarte Wouwen** *M migrans*. De meeste (16) passeerden telpost De Horde, Lopik, Utrecht, en telpost Loozerheide, Weert, Limburg.

**HOPPEN TOT VALKEN** Uit zeker 30 uurhokken werden **Hoppen** *Upupa epops* gemeld. De eerste **Bijeneter** *Merops apiaster* van het jaar vloog op 30 april over Barendrecht, Zuid-Holland. De eerste **Roodpootvalk** *Falco vespertinus* van het jaar trok op 22 april over telpost Kinderdijk. Hierna volgden nog c 20 waarnemingen. Op 22 april werd een melding gedaan van een witte **Giervalk** *F rusticolus* die richting oost vloog langs telpost Lauwersoog, Groningen.

**KRAAIEN TOT RIETZANGERS** De **Schildraaf** *Corvus albus* werd nog tot 20 maart gezien in Leeuwarden, Friesland. Bovendien was er een claim op 23 maart op Texel. Daarna ontbrak ieder spoor van deze long-stayer. De bekende **Kuifleeuwerik** *Galerida cristata* bleef tot 15 maart naast het station van Apeldoorn, Gelderland, maar werd nauwelijks meer bezocht in deze periode en slechts 13 keer ingevoerd op [www.waarneming.nl](http://www.waarneming.nl). Ook trok op 23 april een exemplaar langs telpost Breskens. De soort wordt vanaf 1 januari 2015 beoordeeld door de CDNA en sindsdien zijn er slechts vier geweest, waaronder bovengenoemde, en twee aanvaarde in 2015. Een **Kortteenleeuwerik** *Calandrella brachydactyla* werd op 25 april gemeld bij Callantsoog, Noord-Holland. Vanaf 15 april werden in totaal negen trekkende **Roodstuitzwaluwen** *Cecropis daurica* gemeld; geen enkele bleef een tijdje hangen. **Bladkoning** *Phylloscopus inornatus* blijft een zeldzame verschijning in het voorjaar. Er werd een zingende gemeld op 13 maart in Castricum, Noord-Holland, en op 31 maart riep een exemplaar bij telpost Berkheide bij Katwijk. Op 26 april zong, opmerkelijk genoeg, een **Humes Bladkoning** *P humei* op de begraafplaats van Noordwijk, Zuid-Holland; de laatste voorjaarswaarneming ooit. Vanaf 25 april zong een **Iberische Tijftjaf** *P ibericus* in een woonwijk in Haarlem. **Graszangers** *Cisticola juncidis* waren met name vertegenwoordigd in Zeeuws-Vlaanderen, Zeeland, met twee bij Nieuwvliet-Bad tot 24 maart en daarna nog één op 19 april, één bij Braakman-Noord op 1 april en één bij telpost Breskens op 11 april. Op 12 april zongen er niet minder dan vijf in het Verdrongen Land van Saeftinghe. De enige buiten

Zeeuws-Vlaanderen werd op 18 april gemeld in de omgeving van Moergestel, Noord-Brabant.

**WATERSPREEUWEN TOT GORZEN** Een **Roodbuikwaterspreeuw** *Cinclus cinclus aquaticus* was vanaf 5 april op verschillende plekken te vinden in het Geuldal, Limburg. Van 15 maart tot ten minste 2 april was een **Roze Spreeuw** *Pastor roseus*, een adult in zomerkleed, te zien in Froombosch, Groningen; dit betrof de vierde ooit ontdekt in maart. Van 31 maart tot 3 april verbleef een tweedekalenderjaar vrouwtje **Zwartkeellijster** *Turdus atrogularis* in de wijk Hoograven in Utrecht, Utrecht; ondanks de maatregelen rondom het coronavirus werd deze toch door bijna 100 waarnemers getwicht. Een mannetje **Balkankwikstaart** *Motacilla feldegg* liet zich bewonderen op 22 en 23 april in Lentevreugd bij Wassenaar, Zuid-Holland. Indien aanvaard is dit pas het derde geval, maar wel het tweede op deze locatie. Totdat de Havikarend op 23 april langs telpost Breskens kwam, leek een roepend mannetje **Citroenkwikstaart** *M citreola* hier de beste soort van de dag te worden. Daarnaast werden er nog drie gevonden: een mannetje op 16 april in de Amsterdamse Waterleidingduinen bij De Zilk, Zuid-Holland; een vrouwtje op 20 april bij Den Oever, Noord-Holland; en een vrouwtje op 29 april bij Koarnwertesân (Kornwerderzand), Friesland. De **Grote Pieper** *Anthus richardi* bij Camperduin werd gezien tot 2 maart. Hierna volgden vanaf 1 april nog 15 waarnemingen. Vlogen er vorig jaar nog 42 **Duinpiepers** *A campestris* in deze periode langs telposten, nu waren dit slechts een schamele zes. Aan de grond werden **Roodkeelpiepers** *A cervinus* gezien op 22 april in de Veenhuizerstukken bij Stadskanaal, Groningen, en bij Strijensas, Zuid-Holland, en op 24 april (twee) op de Maasvlakte, Zuid-Holland. Daarnaast werden 10 trekkers gemeld. **Ortolaan** *Emberiza hortulana* was zeldzaam deze periode, met slechts waarnemingen van trekkers op 21 april over telpost Loozerheide bij Weert, Limburg, op 22 april over Colijnsplaat, Zeeland, en op 27 april een opvliegend exemplaar bij Winterswijk. Op 30 maart werd een mannetje **Witkopgors** *E leucocephalos* gefotografeerd bij Montferland, Gelderland. Op 4 en 18 april trok een **Dwerggors** *E pusilla* over telpost Breskens. Verder waren er waarnemingen op 5 april over de Asselse Heide bij Assel, Gelderland; op 7 april bij Stellingendam, Zuid-Holland; en op 23 april bij Camperduin. Een vrouwtje **Bosgors** *E rustica* werd op 26 april kortstondig waargenomen in de Eemshaven, Groningen.

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