

## SHORT COMMUNICATION

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# A rare case of a first-winter male hybrid Common Redstart *Phoenicurus phoenicurus* × Black Redstart *P. ochrurus* ringed at Ottenby, Sweden

*En hybridhanne röstjärt Phoenicurus phoenicurus × svart röstjärt P. ochrurus i första vinterdräkt ringmärkt vid Ottenby*

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**A FIRST-WINTER MALE** hybrid Common Redstart *Phoenicurus phoenicurus* × Black Redstart *P. ochrurus* was trapped, ringed, photographed and sound recorded at Ottenby Bird Observatory, SE Sweden. Hybrid redstarts are rare but regularly encountered in Europe, but most observations concern birds in worn breeding plumage during spring and summer. This bird appears to be the first record for Sweden of an autumn bird in fresh post-juvenile plumage.

**Keywords:** hybridization | plumage | wing formula | moult | contact call

During the afternoon of 16 September 2020, an interesting redstart *Phoenicurus* sp. was found by Filip Jansson, Viktor Eriksson and Noel Hohenthal at Ottenby Bird Observatory, Öland, Sweden. Some photos were obtained in the field and the bird—a weakly patterned male in fresh plumage—appeared rather intermediate

between Common Redstart *P. phoenicurus* and Black Redstart *P. ochrurus*, suggesting a hybrid origin. Such hybrids have been reported and extensively characterized in spring plumage (Steijn 2005, van der Spek & Martinez 2018, Martinez *et al.* 2019), but very few cases are known from birds in first-winter plumage. Fortunately,

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the bird visited the bird observatory garden and after some time it was trapped, examined, and photographed, enabling a more detailed documentation of its plumage.

## Plumage and morphology

Overall, the bird exhibited a rather female-like plumage. The upperparts were dark brownish-grey, estimated to be slightly closer to female-type Black Redstart than Common Redstart. On the other hand, the underparts were clearly paler and warmer than in female Black Redstarts, showing a weak and warm grey-buff hue over breast and belly, turning even warmer and cleaner orange-buff towards the vent and undertail coverts. The wing length was 86 mm; fat score 3 (Pettersson & Hasselquist 1985, extended in Sjöberg *et al.* 2015); weight 16.7 g. In both Black and Common Redstart, adult birds perform a complete post-nuptial moult while young birds instead conduct a partial moult

including body, lesser and median coverts, and a few inner greater coverts. The bird was aged as first calendar year (1CY) based on an obvious moult contrast with four inner post-juvenile greater coverts and six outer unmoulted juvenile ones. The post-juvenile moult was nearly completed with just remnants of feather sheaths on single flank feathers (score 5 on the scale developed by Bensch & Lindström 1992). It was sexed as a male based on black feather bases to the lores, the ear-coverts and the throat.

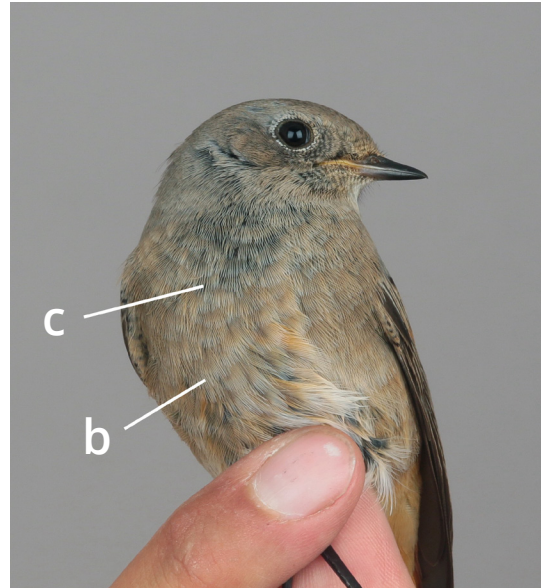
Several plumage characters were found to be intermediate between Common and Black Redstart, supporting a hybrid history:

- 1) The overall colouration of the bird's upperparts was slightly closer to Black Redstart (rather dull brownish-grey, see Figure 1), whereas the lower breast and belly were warm grey-buff interspersed with some rufous (Figure 2).



**FIGURE 1.** Hybrid Common Redstart *Phoenicurus phoenicurus* × Black Redstart *P. ochruros*, Ottenby, Sweden, 16 September 2020. Note the rather dull brownish-grey upperparts (a), slightly browner than the average Black Redstart. Photo: Ottenby Bird Observatory. — Hybrid rödstjärt *Phoenicurus phoenicurus* × svart rödstjärt *P. ochruros*, Ottenby, Sverige, 16 september 2020. Notera den tämligen matt brungrå ovsidan (a), något brunare än en genomsnittlig svart rödstjärt. Foto: Ottenby fågelstation.

- 2) The black throat pattern was diffuse and concealed under wide pale feather tips, but reached a bit further down the upper breast than normally seen in Common Redstart (Figure 2).
- 3) The underwing coverts were obviously intermediate (Figure 3), showing both grey and pale orange portions (normally grey in Black Redstarts of the western ssp *gibraltariensis* while orange in Common Redstarts and in Black Redstarts of the eastern ssp *phoenicuroides*).
- 4) The primary (P) spacing ratio  $P6-P7/P5-P6$  was 1.24 in the Ottenby bird (Figure 4). Martinez *et al.* (2019) gives the following ratios:
  - Black Redstart ssp. *gibraltariensis* 2.0–2.5 (mean 2.29, n=49)
  - Black Redstart ssp. *phoenicuroides* 1.57–3.0 (mean 2.19, n=10)
  - Common Redstart ssp. *phoenicurus* 0.41–1.17 (mean 0.9, n=72)
  - Hybrid Common × Black Redstart 0.88–2.25 (mean 1.28, n=36)
  - Backcross with *gibraltariensis* 0.4–4.5 (mean 2.20, n=6)



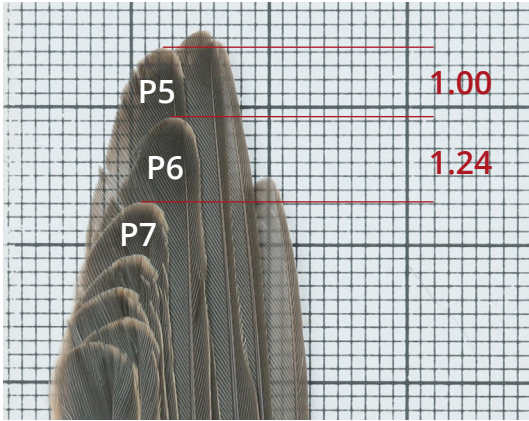
**FIGURE 2.** Hybrid Common Redstart *Phoenicurus phoenicurus* × Black Redstart *P. ochruros*, Ottenby, Sweden, 16 September 2020. The lower breast and belly was warm grey-buff, interspersed with some rufous in the feather centers (**b**). Note also the black throat pattern, reaching a bit further down the upper breast (**c**) than normally seen in Common Redstart. Photo: Ottenby Bird Observatory.



**FIGURE 3.** Underwing coverts of 1CY male Black Redstart *Phoenicurus ochruros* (**d**; October), 1CY male hybrid Common Redstart *P. phoenicurus* × Black Redstart (**e**; Ottenby, Sweden, 16 September 2020), and 2CY male Common Redstart (**f**; April). We lack an illustration of the underwing coverts of 1CY male Common Redstart, but since none of the species perform any moult during winter, the comparison here is still relevant. Note the intermediate pattern shown by the hybrid (middle panel, **e**). Photos: Ottenby Bird Observatory.

— Undre vingtäckare av 1K hanne svart rödstjärt *Phoenicurus ochruros*, (**d**; oktober), hybrid rödstjärt *P. phoenicurus* × svart rödstjärt (**e**; Ottenby, Sverige, 16 september 2020), och 2K hanne rödstjärt (**f**; april). Vi saknar bild av undre vingtäckarna hos en 1K hanne rödstjärt, men eftersom ingen av arterna ruggar under vintern är jämförelsen med en vårfågel ändå relevant. Notera den intermediära teckningen som hybriderna uppvisar (mittre panelen, **e**). Foto: Ottenby fågelstation.

— (Figur 2)  
Hybrid rödstjärt  
*Phoenicurus*  
*phoenicurus* × svart  
rödstjärt *P. ochruros*,  
Ottenby, Sverige, 16  
september 2020.  
Nedre delen av  
bröstat samt buken  
var varmt gråbeige,  
med inslag av  
varmare rödtoner  
i fjädercentra (**b**).  
Notera också att den  
svarta strupeckning-  
en når något längre  
ned mot övre delen  
av bröstet (**c**) än hos  
en rödstjärt. Foto:  
Ottenby fågelstation.



**FIGURE 4.** Wing formula of the hybrid Common Redstart *Phoenicurus phoenicurus* × Black Redstart *P. ochruros*, Ottenby, Sweden, 16 September 2020. The spacing between primaries (P) 6–7 and 5–6 were measured and the primary spacing ratio for P6–P7/P5–P6 calculated to 1.24, which is within the hybrid interval, but outside the interval of pure Common or Black Redstarts, according to Martínez *et al.* (2019). Photo: Ottenby Bird Observatory.

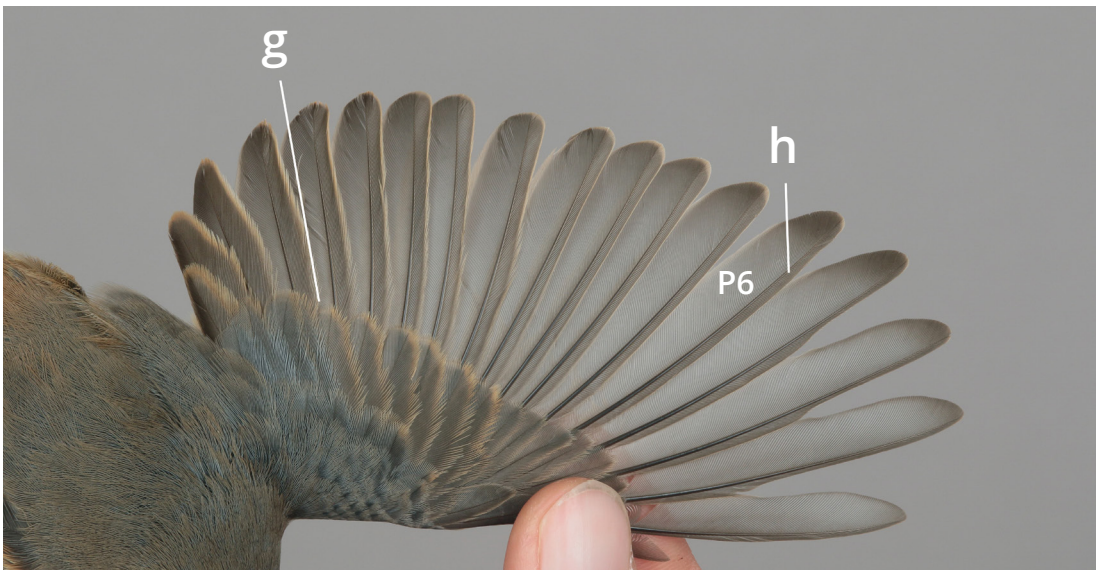
— *Vingformel för hybrid rödstjärt* *Phoenicurus phoenicurus* × *svart rödstjärt* *P. ochruros*, Ottenby, Sverige, 16 september 2020. Avståndet mellan spetsarna för handpenna (P) 6–7 och 5–6 mättes och handpennavståndens kvot beräknades till 1,24, vilket är inom ramarna för hybrider, men utanför spannet för rena rödstjärtar eller svarta rödstjärtar enligt Martínez *m. fl.* (2019). Foto: Ottenby fågelstation.

Further relevant notes:

- 5) Similar to Common Redstart, P6 lacked any emargination (Figure 5).
- 6) No white was present at the base of the forehead feathering.
- 7) The tertials were all juvenile and, hence, did not reveal any white in the edges as seen in post-juvenile tertials in Black Redstart *ssp. gibraltariensis*.
- 8) The bird had six unmoulted juvenile outer greater coverts (see Figure 5). Such moult range is more commonly found in Black Redstart (mean 6.1, SD=1.88, n=239) than in Common Redstart (mean 7.8, SD=0.79, n=3,657; Ottenby Bird Observatory, unpublished data).

## Calls

During field observations, the bird alternated between two different types of calls. The most frequent one was a sharp and straight “vitt, vitt, vitt” with a frequency range within 5.0–6.3 kHz, repeated in rather slow pace; to our ears identical to the common call heard from Black Redstart. At a couple of occasions, the bird made



**FIGURE 5.** Spread wing of the hybrid Common Redstart *Phoenicurus phoenicurus* × Black Redstart *P. ochruros*, Ottenby, Sweden, 16 September 2020. Note the moult contrast (**g**) within the greater coverts (six unmoulted juvenile outer greater coverts are retained) as well as the lack of emargination (**h**) on primary 6 (P6). Photo: Ottenby Bird Observatory.

— *Utbredd vinge av hybrid rödstjärt* *Phoenicurus phoenicurus* × *svart rödstjärt* *P. ochruros*, Ottenby, Sverige, 16 september 2020. Notera ruggningsgränsen (**g**) bland de större armtäckarna (sex oruggade juvenila yttre större täckare) liksom avsaknaden av ytterfänsinskränning (**h**) på sjätte handpennan (P6). Foto: Ottenby fågelstation.

a “teck, teck, teck” sound, which is only rarely heard from Black Redstarts outside of their breeding territories. Recordings of both call versions from the Ottenby bird can be heard on xeno-canto (<https://xeno-canto.org/>) under the accession numbers XC679308 (<https://xeno-canto.org/679308>), XC679265 (<https://xeno-canto.org/679265>), and XC679266 (<https://xeno-canto.org/679266>).

## Discussion

The combination of plumage (intermediate upper- and underparts, underwing coverts and throat), and biometry (intermediate wing formula) supports a hybrid origin of the Ottenby bird.

The natural habitats for Common Redstart are forested areas, parklands, and gardens while the Black Redstart originates from mountainous habitats with little or no higher vegetation (Cramp 1988). However, in modern time, and with a growing human population, the Black Redstart has spread into towns and settlements where artificial buildings and industrial areas with surrounding ruderal land has been colonised (Cramp 1988; Sedláček *et al.* 2004; Andersson 2015). It is likely that this development has brought the two species closer and thereby increased the likelihood of hybridisation.

Nowadays, hybrids between Common × Black Redstarts are rarely, albeit rather regularly, encountered. In a recent review of the occurrence in Europe, Martínez *et al.* (2019) described a total of 121 records of hybrid individuals, with 2–16 records per year since 2000, and the number of records has increased markedly over the past 30 years. However, it may be difficult to say whether this reflects an increased observer awareness and availability of records from online resources, or a true increase of hybridisation following the range expansion of Black Redstart (Martínez *et al.* 2019). Most records are from central Europe, especially Germany, but the observations are distributed from Finland in the north to Malta in the south. The same study discusses the plumage variation in these birds (Martínez *et al.* 2019), and further hybrid individuals are discussed in e.g. Steijn (2005), Nicolai *et al.* (1996), and in van der Spek & Martínez (2018). Notably, the vast majority of the recorded hybrids are from spring and summer, and there are very few records of autumn birds.

In Martínez *et al.* (2019), spring male hybrids are assigned to six phenotypes based on plumage details: Type 1 (46%), classic hybrid plumage showing black upper breast, red lower breast and belly, white forehead, and white wing panel; Type 2 (18%), classic, but lacking white wing panel; Type 3 (5%), classic, but lacking both white forehead and wing panel; Type 4 (10%), extremely pale, cream to greyish body with only a slight orange hue; Type 5 (12%), similar to Common Redstart but with black bib reaching upper breast; Type 6 (9%), very similar to Black Redstart but showing orange belly and lower breast. This categorization is difficult to apply on autumn birds in fresh plumage, since much of the relevant patterns are concealed under pale fringes. In the Ottenby bird, the lower breast and belly was rather drab and colourless grey-buff, and the black throat pattern weak and rather diffuse. This may suggest that this individual in spring, in worn plumage, perhaps would be categorized as a type 4 bird (‘birds with an extremely pale, cream to greyish body with only slight orange hue’).

The Swedish national bird report system Artportalen (<https://www.artportalen.se/>) contains no previous autumn records of redstart hybrids, suggesting that the Ottenby individual may have been the first autumn record for the country. Given the increasing interest and knowledge among today’s bird watchers, as well as the potential increase in hybridisation incidence between Black and Common Redstarts, it is likely that more autumn records will follow in the near future.

## Acknowledgements

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## Svensk sammanfattning

Under eftermiddagen den 16 september 2020 hittades en intressant rödstjärt *Phoenicurus* sp. av Filip Jansson, Viktor Eriksson och Noel Hohenthal vid Ottenby fågelstation, Öland. Dräkten upplevdes redan i fält intermediär mellan svart rödstjärt *P. ochrurus* och rödstjärt *P. phoenicurus*. Fågeln höll till i den norra delen av stationsträdgården och fångades in för examination och dokumentation.

Dräkten var i grunden rätt blek och kontrastlös. Ovansidan var mörkt brungrå, något närmare en honfärgad svart rödstjärt än hona rödstjärt. Undersidan var ljusare och varmare än hos honfärgade svarta rödstjärtar med en varmt gråbrun nyans över bröstet som ned mot buk och undergump blev ännu varmare och renare orangegul. Vinge 86 mm; fett 3; vikt 16,7 g. Fågeln åldersbestämdes till 1K baserat på en uppenbar ruggningskontrast mellan fyra inre post-juvenila större armtäckare och sex yttre oruggade juvenila dito. Den könsbestämdes till hane baserat på svarta fjäderbaser i tygeln, örontäckarna och strupen.

Flera karaktärer bedömdes som intermediära mellan rödstjärt och svart rödstjärt:

- 1) Ovansidans färg bedömdes ligga något närmare en honfärgad svart rödstjärt än hona rödstjärt (figur 1) medan undersidan var relativt ljust och varmt gråbrun med tydliga varma orangegula inslag över mage och undergump (figur 2).
- 2) Den svarta strupteckningen var diffus och dold under ljusa fjädertoppar, men nådde en bit längre

ner på det övre bröstet än normalt hos rödstjärt (figur 2).

- 3) Undre vingtäckare var uppenbart intermediära (figur 3), och uppvisade både grå och ljust orange partier (vanligen grå hos svart rödstjärt ssp. *gibraltariensis* och orange hos rödstjärt samt svart rödstjärt ssp. *phoenicuroides*).
- 4) Avståndet mellan handpennetopparna (P) mättes och kvoten P6–P7/P5–P6 var 1,24 hos Ottenbyfågeln (figur 4).

Andra relevanta noteringar:

- 5) I likhet med rödstjärt saknades inskärning på ytterfanet av sjätte handpennan.
- 6) Inget vitt fanns basalt på pannfjädrarna.
- 7) Tertialerna var juvenila och gav därför inga ledtrådar (vitkantade hos post-juvenila hannar av svart rödstjärt).
- 8) Fågeln hade sex oruggade juvenila yttre större armtäckare (se figur 5). En sådan omfattning av ruggningen är vanligare hos svart rödstjärt (medelvärde 6,1, SD=1,88, n=239) än hos vanlig rödstjärt (medelvärde 7,8, SD=0,79, n=3657).

I fält växlade fågeln mellan två olika typer av locklåten. Oftast hördes ett skarpt och rakt ”vitt, vitt, vitt” kring 5,0–6,3 kHz, upprepat i ganska långsam takt; i våra öron identisk med det vanliga locklåtet från svart rödstjärt. Vid ett par tillfällen hördes också smackande ”teck, teck, teck”-ljud, som sällan hörs från svart

rödstjärt utanför häckplatserna. Inspelningar av båda locken från Ottenbyfågeln kan höras på xeno-canto (<https://xeno-canto.org/>).

Kombinationen av dräkt (intermediär över- och undersida, undre vingtäckare och strupe) och biometri (vingformel) talar för ett hybridursprung för Ottenbyfågeln. De båda arternas historiska habitatpreferenser skiljer sig åt, men sedan den svarta rödstjärten i modern tid koloniserat stadsmiljöer har arterna förts närmare varandra. Det är troligt att denna förändrade situation har ökat sannolikheten för hybridisering. Hybrider anträffas idag sällsynt men regelbundet. Trenden verkar ökande, men det är svårt att fastslå om detta återspeglar en verklig ökning av hybridisering eller om

det snarare handlar om en kombination av ökad medvetenhet bland ornitologer och allt större tillgänglighet till fynduppgifter i olika webbaserade rapporteringssystem. Noterbart är att en stor majoritet av de rapporterade hybriderna är från vår och sommar, och det finns mycket få rapporter av höstfåglar. I Artportalen (<https://www.artportalen.se/>) finns inga tidigare fynd av rödstjärthybrider från hösten och Ottenbyfågeln kan därmed utgöra det första höstfyndet för Sverige. Med tanke på det ökande intresset och kunskapen bland dagens fågelskådare och den eventuella ökningen av hybrider mellan arterna är det troligt att fler höstfynd kommer att följa inom en snar framtid.



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