

## Korta rapporter – *Short communications*

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### An exceptionally large Willow Warbler *Phylloscopus trochilus*

*En ovanligt stor lövsångare*  
*Phylloscopus trochilus*

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In the morning of 13 May 2010, ÅL trapped a Willow Warbler *Phylloscopus trochilus* (Figure 1) in a mistnet at Rörumstrand, near Simrishamn in southernmost Sweden (55.644 dec°N, 14.267 dec°E). Already when taking it out of the net it was clear that this was an unusually large individual. This was confirmed by its measurements: wing length 78.0 mm (to the nearest half mm, maximum chord, Svensson 1992, Figure 2), tail length 60.0 mm (to the nearest half mm, from the base of tail feathers to the tip of longest tail feather, Svensson 1992, Figure 2), and tarsus 23.5 mm (to the nearest 0.1 mm, with foot and tibiotarsus held perpendicular to tarsometatarsus, measuring the distance between the extreme bending points, Alatalo & Lundberg



Figure 1. The large Willow Warbler *Phylloscopus trochilus* trapped on 13 May 2010.  
*Den stora lövsångare som fångades 13 maj 2010.*

1986). It had a fat score of 3 on a scale from 0 to 6 (Pettersson & Hasselquist 1985) and weighed 10.8 g. The bird was ringed and released soon after processing, and was not seen or retrapped again.

Male Willow Warblers have on average more than 5 mm longer wings than females, with only a small overlap (Williamson 1976, Bensch et al. 2009). Due to its very long wing (see below), the bird was most certainly a male. Further, the bird was probably on migration, since the local breed-



Figure 2. The wing length was 78.0 mm and tail length 60.0 mm.  
*Vinglängden var 78,0 mm och stjärtlängden 60,0 mm.*

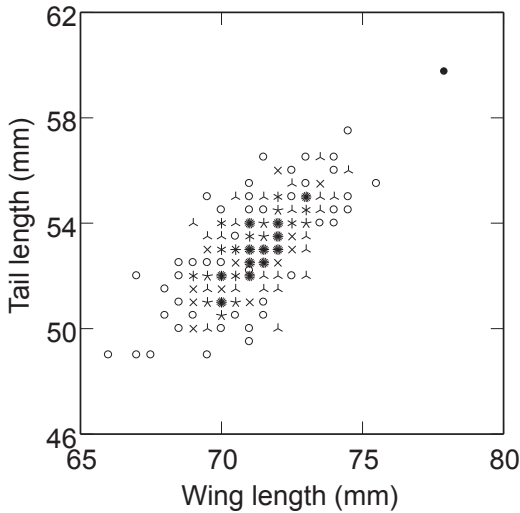


Figure 3. Wing and tail length of male Willow Warblers trapped during breeding in northern Sweden, Norway and Finland. Circles denote single birds and the more complex symbols show gradually more individuals per wing and tail length combination. The focal bird from Rörum is shown as a black dot.

*Ving- och stjärtlängd för lövsångarehanar fångade under häckningstid i norra Sverige, Norge och Finland. Cirklar betyder enstaka individer och de mera komplexa symbolerna visar gradvis fler individer för varje kombination. Rörums-fågeln markeras med svart prick.*

ers had already been around for a few weeks, and in mid May they normally carry almost no fat (fat score 0 and 1). It is therefore likely that the focal bird belonged to the *acredula* subspecies that breeds in northern Sweden. Males of the *acredula* subspecies pass southern Sweden on spring migration around 10–20 May (Hedenström & Pettersson 1984), which fits the trapping date.

At Rörumstrand, ÅL has previously measured 29 Willow Warblers in April–June. The longest wing recorded was 71 mm. In Ammarnäs, Swedish Lapland (65.964 dec°N, 16.069 dec°E), ÅL measured 117 adult males between 30 May and 2 August 1984–2006. They had an average wing length of 71.15 mm ( $\pm 1.36$  standard deviations [SD], range 67–75 mm). Three birds had a wing of 74 mm and one bird measured 75 mm.

A project studying the migratory divide and subspecies differences of Willow Warblers in northern Europe (Bensch et al. 2009) serves as another comparison. We used data from 315 adult males trapped 2000–2007 on territories in northern Sweden, Norway and Finland (i.e. within the breeding range of *acredula*). The longest wing recorded was 75.5 mm (mean 71.17  $\pm 1.45$ ), the longest tail 57.5

mm (mean 52.99  $\pm 1.59$ ), the longest tarsus 23.9 mm (mean 22.33  $\pm 0.60$ ) and highest mass 11.7 g (mean 9.76  $\pm 0.52$ ). Clearly, in the feather measures, i.e. wing and tail length, none of the birds was close to being as large as our focal bird (Figure 3). However, as far as tarsus length and body mass is concerned, our focal bird was not exceptionally big.

What is the likelihood of finding a Willow Warbler with wing length 78 mm in Sweden? The wing length of our focal bird is 5.05 SD larger than the population mean measured by ÅL at Ammarnäs. Biometric measures such as wing length in birds usually follow a normal distribution (Sokal & Rohlf 1995), and using the normal distribution we calculated that the likelihood of deviating 5.05 standard deviations or more above the average is  $2.2 \times 10^{-7}$ , which is one in 4.5 million. The breeding population of Willow Warblers in Sweden has recently been estimated at 13.2 million pairs (Ottoesson et al. 2012), and accordingly there should be an equal number of males. Hence, the expected number of males having a wing length of 78 mm or more is 2.9. Assuming that around half the Willow Warblers belong to the *acredula* subspecies of northern Sweden, purely statistically, we may have trapped the single largest individual of them.

However, unusually sized individuals may arise in populations for reasons that violate the use of a normal distribution for estimating their frequencies. For example, we cannot exclude that our focal bird carried a novel mutation in a gene with a particularly large effect on size, or that some kind of environmental influence resulted in abnormal expression of growth hormones during feather development. In humans, the syndrome of overproduction of growth hormones is referred to as gigantism (Eugster & Pescovitz 1999). Regardless of the reason, the wing and tail lengths of this willow warbler appear extreme. How tall would a human be that was 5.05 SD taller than the population average?

A set of male biology students at Lund University had an average body length of 180.5 cm and a SD of 6.92 (n=114, range 160–205 cm, Torbjörn Säll, unpublished data). A male student 5.05 SD larger than the average, a situation corresponding to that of our focal bird, would measure 215.4 cm. According to Wikipedia, the Guinness book of records states that the tallest man in Sweden in 2007 was 217 cm. Hence, trapping the single largest Willow Warbler in Sweden is in the same order of magnitude as finding the longest Swede (given the around 4.5 million male inhabitants in Sweden).

However, whereas the tallest adult man would for sure get a lot of attention, the largest Willow Warbler may easily escape attention from humans. In 1911–2008 just above 1.1 million Willow Warblers were ringed in Sweden (The Swedish Bird Ringing Centre, [www.nrm.se/rc](http://www.nrm.se/rc)). Since around 1980, when measuring wing length started to become more common among bird ringers, “only” about 800 000 have been ringed. Finding a Willow Warbler with a wing of 78 mm will surely remain a rare event in Sweden.

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## Sammanfattning

En stor lövsångare fångades nära Simrishamn i Skåne den 13 maj 2010. Den hade vinglängd 78 mm, stjärtlängd 60 mm, tarslängd 23,5 mm, fettklass 3 (på en skala 0–6) och vägde 10,8 g (Figur 1 & 2). Fågeln var med största sannolikhet en hane av rasen *acredula*, vilken häckar i norra Sverige. Både vinge och stjärt var betydligt längre än någon lövsångare som vi tidigare fångat (max 75,5 mm respektive 57,5 mm på 452 hanar i norra Skandinavien under häckningstid). Fågeln var drygt 5 standardavvikelse större än medelvärdet och för en

gångse normalfördelning skall det bara finnas en sådan fågel på 4,5 miljoner individer. Rent statistiskt kan vår fågel ha varit den enskilt största nordliga hanen i den svenska populationen, även om det inte kan uteslutas att fågelns storlek berodde på någon slags defekt. Motsvarande avvikande storlek skulle bland svenska män motsvaras av en kroppslängd på 215,4 cm, vilket är nära den längsta kända människan i Sverige just nu (217 cm).

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## Willow Warbler *Phylloscopus trochilus* nesting in a juniper during a peak lemming year

*Lövsångare Phylloscopus trochilus häckar uppe i en enbuske under ett lämmelår*

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Here we would like to report an unusual nest location for a willow warbler *Phylloscopus trochilus*. These birds usually build a well concealed ground nest in the vegetation at the base of trees, shrubs, or grass tussocks (Cramp & Brooks 1992). Breeding studies most typically report nests on level ground, on slopes, and on the side of banks or ditches (Kuisisto 1941, Lapshin 1976, Schönfeld 1982, Arvidsson & Nilsson 1983, Danilov et al. 1984, Cramp & Brooks 1992). Despite being abundant across most of their large breeding range and extensively studied during the breeding season, very few nests are found above the ground. In these cases, nests were reported up to 4.8 meters above ground primarily on slopes, crevices, and banks, and few in bushes and trees ground (Payne 1896, Arundel 1917, Bolam 1918, von Haartman 1969, Arheimer & Enemar 1974, Schönfeld 1982, Hogstad 1985).

On 4 June, 2011, approximately 2 km from Ljungdalen, Sweden (62.8° N 12.7° E), a female willow warbler was located carrying moose hair as nest material. The nest was located approximately