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Records of Bonelli's Warbler *Phylloscopus bonelli* ssp. far outside its breeding range

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Until recently the Bonelli's Warbler was divided into two subspecies: Western Bonelli's Warbler *Phylloscopus bonelli bonelli* and Eastern Bonelli's Warbler *Phylloscopus bonelli orientalis* (Cramp 1992, Glutz von Blotzheim & Bauer 1991). These subspecies have very subtle difference in colouration and similar song (Cramp 1992, Occhiato 2007), making field identification rather difficult (Occhiato 2007). The only apparent and reliable feature that allows separation in the field are distinct contact and alarm calls (Occhiato 2007). However, these two subspecies exhibit small difference in size, Eastern Bonelli's Warbler having a longer wing (63.5–73 mm) compared to the Western form (57–68 mm, Svensson 1992). There are also minor but consistent differences in the colouration of the head, upper body and the fringes of the greater wing-coverts, especially in spring (Svensson 1992, Occhiato 2007). The upper body of the Western Bonelli's Warbler is brownish with a very slight grey tinge, while the Eastern Bonelli's Warbler is greyer, virtually without brown tinge. The latter also has conspicuous whitish eye-ring that is not so visible in western subspecies (Occhiato 2007). After work of Helbig et al. (1995) who, based on cytochrome b gene region sequencing, showed large differences between the subspecies, these two taxa were elevated to the full species status, *Phylloscopus bonelli* and *Phylloscopus orientalis*, respectively (BOU 1997).

The breeding distribution of the two species is disjunct with a gap in former Yugoslavia (Fig. 1). The range of the Western Bonelli's Warbler is W and SW Europe and NW Africa (Atlas Mountains, Glutz von Blotzheim & Bauer 1991, Cramp 1992). Spain and France harbour >90% of the total population (Hagemeijer & Blair 1997). This species is also common in Portugal, Italy, Switzerland, Austria and S. Germany; some breeding records were from Czech Republic and SW Poland (Hagemeijer & Blair 1997, Tomiałojc 1990). The Western Bonelli's Warbler apparently has slowly increased its numbers and range in the 20th century, reaching NE France, Belgium and the Netherlands (Hagemeijer & Blair 1997). The range of the Eastern Bonelli's Warbler extends over SE Europe (Greece, Albania, Bulgaria and Turkey) and Asia Minor (E Iran, Lebanon, N Israel, southeasternmost Turkey). The main habitat for both species is quite dry, open, woodland in hilly and mountainous areas (Occhiato 2007).

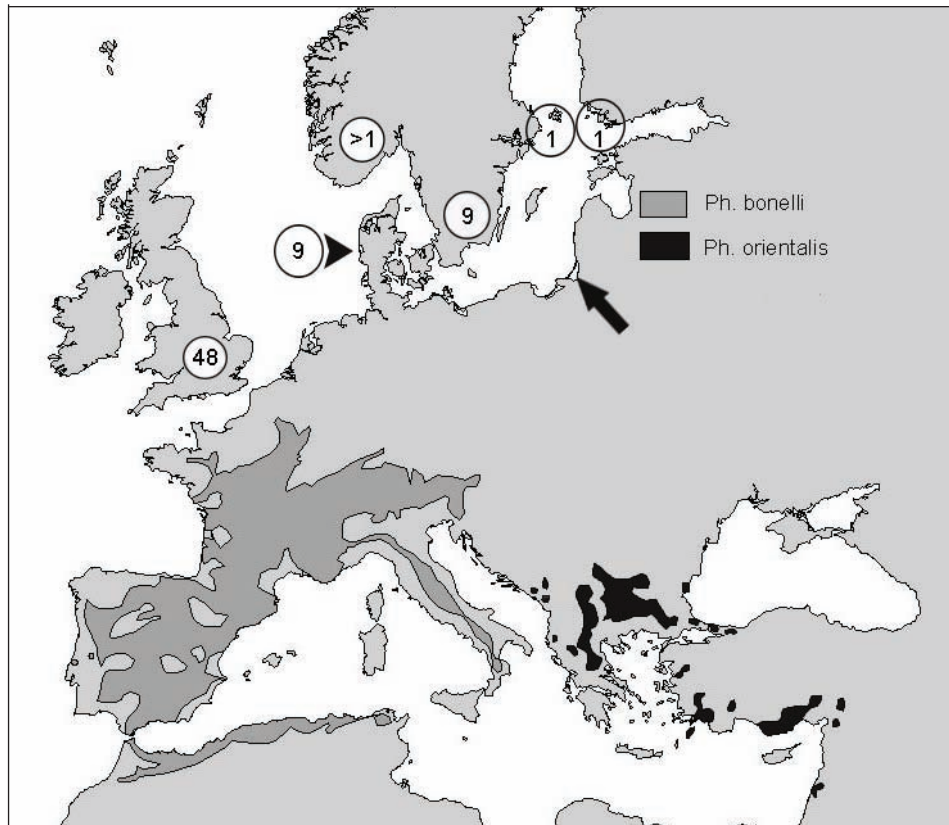


Figure 1. Breeding range of Western, *Phylloscopus bonelli*, and Eastern, *Phylloscopus orientalis*, Bonelli's Warbler (redrawn from Glutz von Blotzheim & Bauer (1991) with changes). The captures of Bonelli's Warbler far outside its breeding range is also shown. Only total numbers of captures are shown. The Courish Spit is indicated by an arrow.



Figure 2. Western Bonelli's Warbler, *Phylloscopus bonelli*, captured on the Courish Spit on May 20, 2010. Photo: Mikhail Markovets.

One Bonelli's Warbler was captured in large Rybachy-type funnel trap (for trap description see Payevsky 2000) at the field station "Fringilla" of the Biological Station "Rybachy" (55°05'N, 20°44'E; Courish Spit, SE Baltic) on May 20, 2010 at 14:00 East European summer time. According to plumage colouration it was a Western Bonelli's Warbler *Phylloscopus bonelli* (Fig. 2); it had a wing length of 67 mm, body mass of 8.3 g and only traces of fat (roughly 1–2 fat score following Kaiser 1993). The wind pattern during seven nights preceding capture suggest that this bird possibly arrived on the Courish Spit in the night 15/16 May, as it was only during that particular night that southern wind, favorable for northward movement, was recorded. The capture date as well as the presumed arrival date is towards the end of the normal migratory period (late May) of the Western Bonelli's Warbler in the north-east of its breeding range (S Germany, Cramp 1992).

The record of the Western Bonelli's Warbler represents a new species for Russia's fauna (Koblik et al. 2006). Normally both Bonelli's Warbler species occur as vagrants in northwest Europe. The Eastern Bonelli's Warbler remains a great rarity, whereas the Western species is more common and expanding its range northwards (Hagemeyer & Blair 1997). Until now the Western Bonelli's Warbler (as well as the eastern species) have not been recorded in the countries adjacent to the Courish Spit: Lithuania (Patapavičius 2006, Ričardas Patapavičius, pers. comm), Belarus (Nikiforov et al. 1997; Tatjana Pavluschik, pers. comm), Latvia (Maris Strazds pers. comm., <http://www.putni.lv>), Estonia (Margus Ots pers. comm., <http://www.eoy.ee>). According to Fesenko and Bakotej (2007) there were two records of Bonelli's Warbler (not identified to the species) in Ukraine, one in 1834 and another in 1855. However, there is no certainty as the sources cited are unreliable. However, there are some captures/sightings of the Bonelli's Warbler north and west of the Courish Spit (Fig. 1). Two captures occurred far north, in Finland (Jari Valkama pers. comm, <http://www.luomus.fi/english/zoology/ringing/results/euring/index.htm>) and nine birds were captured in Sweden between 1960–2002 (Fransson et al. 2004). There have been another nine

captures and five sightings in Denmark since the 1960s of which at least five were identified as Western Bonelli's Warbler (Thorup et al. 2009). Some records were also reported from Norway (Thorup et al. 2009). In Britain and Ireland there were 48 captures up until 2009 (Clark et al. 2010) and even more records including field observations (Dymond et al. 1989), of which *ca.* 17% were in spring. All spring records, our case included, probably represent overshooting by Western Bonelli's Warblers. Such a phenomenon could be caused by the global climate change, resulting in the general rise in mean annual temperature in the northern hemisphere that in turn has long lasting consequences for bird behavior, including timing and extent of migration (Møller et al. 2010, Sokolov 2010). The same reason is suggested for the increased spring vagrancy of other species with Mediterranean breeding range. For instance, there are three recent spring captures of the Subalpine Warbler, *Sylvia cantillans* (Shapoval 1998, Loskot et al. 1999) and one capture of the Sardinian Warbler, *Sylvia melanocephala* (Bulyuk & Leoke 2010) on the Courish Spit. However, autumn records of Bonelli's Warbler far outside the breeding range are more common (Cramp 1992). Most of these cases can be explained by range extension attempts by first-year birds during their postfledging dispersal (Sokolov 1997).

References

- BOU. 1997. Records Committee: Twenty-third Report (July 1996). *Ibis* 139: 197–201.
- Bulyuk, V.N. & Leoke D. 2010. The Sardinian Warbler, *Sylvia melanocephala* (J.F. Gmelin, 1789), a new species for Russia's fauna. *Avian Ecol. Behav.* 17: 23–24.
- Clark, J.A., Robinson, R.A., Du Feu, C., Wright, L.J., Conway, G.J., Blackburn, J.R., Leech, D.I., Barber, L.J., De Palacio, D., Griffin, B.M., Moos, D. & Schäfer, S. 2010. Bird ringing in Britain and Ireland in 2009. *Ring. Migr.* 25: 88–127.
- Cramp, S. 1992. *The Birds of the Western Palaearctic*. Vol. 6 Warblers. Oxford University Press, Oxford.
- Dymond, J.N., Fraser, P.A. & Gantlett, S.J.M. 1989. *Rare birds in Britain and Ireland*. Calton.
- Glutz von Blotzheim, U.S. & Bauer, K.M. 1991. *Handbuch der Vögel Mitteleuropas*. 12(2):1162. AULA-Verlag, Weisbaden.
- Fesenko, H.V. & Bakotej, A.A. 2007. The annotated list of the Ukrainian scientific names of the bird species belonging to the fauna of Ukraine (with characteristics of status of the species). Kyiv-Lviv.
- Fransson, T., Hall, S., Karp, K., Kroon, C., Staav, R., Sällström, B. & Sällström, U.B. 2004. Report on Swedish Bird Ringing for 2002. Stockholm.
- Hagemeyer, E.J.M. & Blair, M.J. 1997. *The EBCC Atlas of European breeding birds*. T & A D Poyser, London.
- Helbig, A.J., Seibold, I., Martens, J. & Wink, M. 1995. Genetic differentiation and phylogenetic relationships of Bonelli's Warbler *Phylloscopus bonelli* and Green Warbler *P. nitidus*. *J. Avian Biol.* 26: 139–153.
- Kaiser, A. 1993. A new multi-category classification of subcutaneous fat deposits of songbirds. *J. Field Ornithol.* 64: 246–255.
- Koblik, E.A., Red'kin, Ya. & Arkhipov, V.Yu. 2006. Checklist of the birds of Russian Federation. KMK Scientific Press Ltd, Moscow (in Russian).
- Loskot, V.M., Sokolov, L.V. & Payevsky, V.A. 1999. The Subalpine Warbler, *Sylvia cantillans* (Pallas, 1764), new to the fauna of Russia, with a review of records of its northern vagrancy (Aves: Sylviidae). *Zoosystematica Rossica* 8(1): 191–199.

- Møller, A.P., Fiedler, W. & Berthold, P. (eds). 2010. Effects of climate change on birds. Oxford University Press, Oxford.
- Nikiforov, M.E., Kozulin, A.V., Grichik V.V. & Tishechkin, A.K. 1997. The birds of Belarus on the eve of the 21st century. Korolev Publishers, Minsk (in Russian).
- Occhiato, D. 2007. Western and Eastern Bonelli's Warblers in the field. *Birding World* 20: 303–308.
- Patapavičius, R. 2006. Bird ringing in Lithuania in 2001. *Ciconia* 10: 5–26.
- Payevsky, V.A. 2000. Rybachy-type trap. In: Busse, P. (ed.) *Bird Station Manual*. Gdańsk, Gdańsk Univ. Press, pp. 20–24.
- Shapoval, A.P. 1998. New records of the Subalpine Warbler *Sylvia cantillans* on the Courish Spit of the Baltic Sea. *Russ. J. Ornithol. Express-issue* 37: 10–11 (in Russian).
- Sokolov, L.V. 1997. Philopatry of migratory birds. *Phys. Gen. Biol. Reviews* 11(2): 1–58.
- Sokolov, L.V. 2010. Climate in the life of plants and animals. TESSA Publishers, Saint-Petersburg (in Russian).
- Svensson, L. 1992. Identification guide to European passerines. Fourth, revised and enlarged edition. Stockholm.
- Thorup, K., Ortvad, T.E. & Jønsson, K.A. 2009. Two Western Bonelli's warblers *Phylloscopus bonelli* from Christiansø, Denmark, confirmed by DNA. *Dansk Orn. Foren. Tidsskr.* 103: 28–29.
- Tomiałojc, L. 1990. *Ptaki Polski*. Państwowe Wydawnictwo Naukowe, Warszawa.