

COMMON REED BUNTING *Emberiza schoeniclus*

Reed Bunting (REEBU)

Ring: 2.3 MA (2.5)

WP = (3) 4 (5)

Incubation: F

Parental care: F, M

IDENTIFICATION

<p>(1) Common Reed Bunting <i>E. schoeniclus</i> excluding breeding ad M; in any plumage, no greenish, olivaceous or yellow tinge</p> <ul style="list-style-type: none"> - no whitish wing bar; MC and GC tipped - brown-buff $\neq 2, 3, 4 (5)$ - head and bill appearance (Fig 1) \neq all - LC intense rufous-brown with \pm grey feathers $\neq 2, 5$ - legs flesh-brown to dark grey $(\neq 2, 4)$ - rump brown or greyish, \pm streaked; oriental populations may exhibit grey-white rump - wing formula $\neq 2, 3, 4$ <p>Fig 1 – 1Y F</p> <p>no distinct black lateral crown-stripe no distinct pale ring of feathers median crown-stripe absent or very ill-defined (paler brown) all grey bill, generally culmen \pm convex black reaching base of lower mandible (rare exceptions) mix of brown, black and greyish-white</p>	<p>(2) Little Bunting <i>E. pusilla</i></p> <ul style="list-style-type: none"> - small, wing ≤ 78 $\neq 3$ - wing bar formed by whitish tip of MC $\neq 1$ - head and bill appearance (Fig 2); face rufous-brown (rarely whitish median stripe or supercilium) \neq all - LC dull brown or brownish-grey, not contrasting $\neq 1$ - legs pink-flesh $\neq (1) 3$ - rump greyish-brown slightly streaked $\neq 4$ - breast and flanks finely streaked - wing formula $\neq 1, 3, 5$ <p>Fig 2 – 1Y / F – autumn</p> <p>narrow distinct ring of feathers, white to cream, more distinct in ad pale buff patch rather uniform, rufous to rufous-buff distinct brown median crown-stripe edged black; sometimes indistinct in imm grey bill, culmen straight or often slightly concave black stops below eye</p>																																										
<p>(3) Lapland Longspur <i>Calcarius lapponicus</i></p> <ul style="list-style-type: none"> - wing $\geq (80) 83$ $\neq 2, 5$ - 2 wing bars (white tip on MC and GC) surrounding broad rufous area (outer web of GC \pm rufous) \neq all - head and bill appearance (Fig 3) \neq all - legs dark brown to blackish $\neq 2, 4$ - rump grey-brown clearly streaked $\neq 4, 5$ - claw of hind toe rather straight and long (Fig 4) \neq all - wing formula; long primary projection $\geq T$ \neq all <p>Fig 3 F</p> <p>pale median crown-stripe pale (yellowish) bill, dark tip; bill sometimes brownish in juv rufous-brown</p> <p>Fig 4 – Hind toe claw</p>	<p>(4) Rustic Bunting <i>E. rustica</i></p> <ul style="list-style-type: none"> - from Scandinavia to N of SE Asia $\neq 1, 5$ - white tip on MC and GC \neq all - head and bill appearance (Fig 5) \neq all - legs flesh-brown $\neq 3$ - belly white; breast and flanks clearly streaked rufous-brown $\neq 2, 3, 5$ - rump rufous-brown unspotted \neq all - wing formula $\neq 1, 3, 5$ <p>Fig 5 1Y</p> <p>long white or pale cream supercilium \pm pale median crown-stripe on rear crown \pm rufous-brown nape often whitish patch edged dark long bill, straight culmen, flesh lower mandible</p>																																										
<p>(5) Pallas's Reed Bunting <i>E. pallasi</i></p> <ul style="list-style-type: none"> - from NE Urals to E Siberia, Asia - 2 rather clear buff-white wing bars $\neq 1$ - culmen straight or almost; upper mandible dark; lower mandible pale pinkish in winter $(\neq 1, 2, 3)$ - LC ash-grey, dull brown-grey, dark grey or buff $\neq 1$ - rump dirty white or buff-white, or even pale greyish, \pm streaked (or even unstreaked) $\neq 1, 3, 4$ - underparts virtually unstreaked (sometimes fine streaks on flanks and breast in 1Y) \neq all - wing formula $\neq 2, 3, 4$ 																																											
<table border="1"> <thead> <tr> <th>Wing formulae</th> <th><i>E. schoeniclus</i></th> <th><i>E. pusilla</i></th> <th><i>C. lapponicus</i></th> <th><i>E. rustica</i></th> <th><i>E. pallasi</i></th> </tr> </thead> <tbody> <tr> <td>WP =</td> <td>(3) 4 (5) $\neq 3$</td> <td>3 4 (5) $\neq 3$</td> <td>2 (3 4) \neq all</td> <td>3 (4) $\neq 3, 5$</td> <td>3 4 5 $\neq 3, 4$</td> </tr> <tr> <td>P6 - WP =</td> <td>1 - 3 $\neq (2) 3, 4$</td> <td>2.5 - 7 $\neq (1) 3, 5$</td> <td>12 - 19 \neq all</td> <td>5 - 7 $\neq 1, 3, 5$</td> <td>1 - 2.5 $\neq 2, 3, 4$</td> </tr> <tr> <td>Em =</td> <td>3 4 5 6 $\neq (2) 3 (4)$</td> <td>3 4 5 [6] $\neq (1) 3 (5)$</td> <td>3 4 [5] \neq all</td> <td>3 4 5 [6] $\neq (1) 3 (5)$</td> <td>3 4 5 6 $\neq (2) 3 (4)$</td> </tr> <tr> <td>Em P6</td> <td>distinct $\neq (2) 3 (4)$</td> <td>slight or no $\neq 1, 5$</td> <td>no $\neq 1, 5$</td> <td>slight or no $\neq 1, 5$</td> <td>distinct $\neq (2) 3 (4)$</td> </tr> <tr> <td>Em P3 =</td> <td>24 - 27 $\neq 2$</td> <td>18 - 22 $\neq 1$</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>Em P5 =</td> <td>21 - 24 $\neq 2$</td> <td>14 - 18 $\neq 1$</td> <td>-</td> <td>-</td> <td>-</td> </tr> </tbody> </table>		Wing formulae	<i>E. schoeniclus</i>	<i>E. pusilla</i>	<i>C. lapponicus</i>	<i>E. rustica</i>	<i>E. pallasi</i>	WP =	(3) 4 (5) $\neq 3$	3 4 (5) $\neq 3$	2 (3 4) \neq all	3 (4) $\neq 3, 5$	3 4 5 $\neq 3, 4$	P6 - WP =	1 - 3 $\neq (2) 3, 4$	2.5 - 7 $\neq (1) 3, 5$	12 - 19 \neq all	5 - 7 $\neq 1, 3, 5$	1 - 2.5 $\neq 2, 3, 4$	Em =	3 4 5 6 $\neq (2) 3 (4)$	3 4 5 [6] $\neq (1) 3 (5)$	3 4 [5] \neq all	3 4 5 [6] $\neq (1) 3 (5)$	3 4 5 6 $\neq (2) 3 (4)$	Em P6	distinct $\neq (2) 3 (4)$	slight or no $\neq 1, 5$	no $\neq 1, 5$	slight or no $\neq 1, 5$	distinct $\neq (2) 3 (4)$	Em P3 =	24 - 27 $\neq 2$	18 - 22 $\neq 1$	-	-	-	Em P5 =	21 - 24 $\neq 2$	14 - 18 $\neq 1$	-	-	-
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Depending on moult progress and wear, head appearance sometimes atypical (eg white supercilium and blackish cheeks in M).

Hybridisation perhaps possible with Yellowhammer *E. citrinella*.

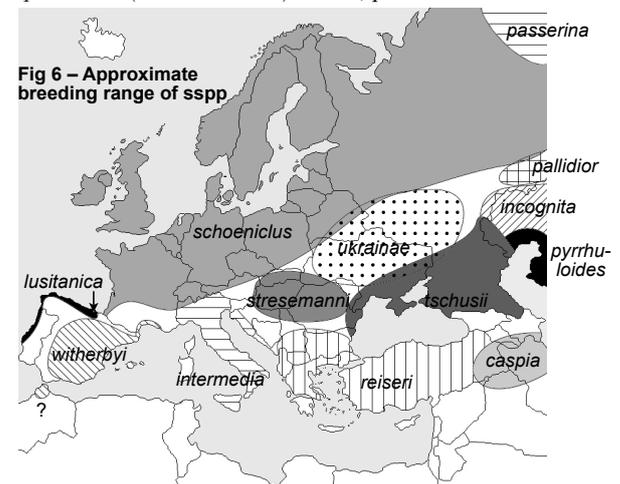
VARIATION (Fig 6)

Up to 40 ssp described, 20 now recognized, clinal and complex variation (revision needed). Paler from W to E; shape of bill highly variable, stronger and more arched towards S. Four groups with areas of intergradation making identification of isolated ind difficult.

1 – group from N Bill thin (Fig 7).

- *schoeniclus* (N Europe to Urals). Bill appearance (Fig 7 and 8). Sometimes divided in 5 other ssp.
- *lusitanica* (NW Spain, Portugal). Bill appearance (Fig 7). Compared to *schoeniclus*, head, upperparts and flanks darker in plumage of F type or in winter; C darker and more colourful.
- *passerina* (NW Siberia). Upperparts slightly paler. Rump often grey. Streaks thinner.

- *parvirostris* (central Siberia). Small, pale.



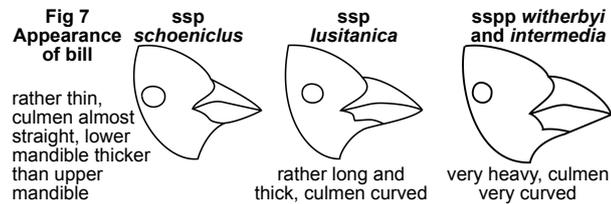
MEASUREMENTS

	<i>schoeniclus</i>		<i>lusitanica</i>		<i>stresemanni</i>		<i>ukrainae</i>	
	M	F	M	F	M	F	M	F
Wing	(72) 74 - 87 (88.5)	(68) 70 - 79 (81)	73 - 81.5	68 - 79	78 - 87	(72.5 - 78)	77 - 87	(69) 73 - 80
Tail	60 - 73	58 - 69	59 - 69.5	57.5 - 68	-	-	-	-
Bill ¹	10.5 - 14.6	10.4 - 13.9	12.5 - 14.6	12.5 - 14.0	11.4 - 13.5	(11.4 - 12.5)	(11.5 - 13.5)	(10.8 - 11.9)
Bill depth ²	(4.4) 4.7 - 6.4	4.5 - 6.1	-	-	5.2 - 6.5	(5.8 - 6.3)	5.2 - 6.5	id
Bill depth ³	4.5 - 5.8	4.1 - 5.7	4.9 - 5.9	4.5 - 5.7	-	-	-	-
Bill width ²	4.5 - 5.9	4.0 - 5.9	-	-	5.2 - 6.3	(5.5 - 6.3)	5.2 - 5.8	id
Bill width ³	3.5 - 5.4	3.2 - 5.0	4.1 - 5.3	3.9 - 4.9	-	-	-	-
Tarsus	18.5 - 24.5	16.8 - 22.2	18.1 - 20.8	17.4 - 20.6	20.8 - 25.0	id	-	-
Weight	(14) 16 - 27	(12) 14 - 25	14.4 - 20.0	13.8 - 19.1	-	-	18 - 25	16.5 - 23

	<i>tschusii</i>		<i>witherbyi</i>		<i>intermedia</i>		<i>reiseri</i>		<i>pyrrhuloides</i>	
	M	F	M	F	M	F	M	F	M	F
Wing	(81.5 - 87.5)	(78 - 84)	74 - 84	69 - 78	76 - 89.5	71.5 - 82	82 - 94	(78 - 83)	86 - 94	(74 - 84)
Tail	-	-	(61 - 77)	(60.5 - 67)	-	-	-	-	-	-
Bill ¹	(12.5 - 13.5)	[11.8 - 12.2]	(12.1 - 15.3)	(11.2 - 13.9)	12.3 - 14.5	12.0 - 13.5	13.4 - 14.7	id	11.9 - 13.5	(12.5 - 13.5)
Bill depth ²	[6.1] (6.4 - 7.4)	id	[5.2] 5.9 - 6.6	5.0 - 6.3	7.0 - 7.8	6.6 - 7.7	7.7 - 9.0	-	7.2 - 9.3	(7.6 - 9.0)
Bill depth ³	-	-	(6.1 - 6.9)	(5.7 - 6.5)	-	-	-	-	-	-
Bill width ²	(6.0 - 6.9)	id	[5.8 - 6.3]	[6.2]	6.6 - 7.9	6.6 - 7.5	-	-	7.1 - 8.7	(7.1 - 7.8)
Bill width ³	-	-	(4.7 - 7.2)	(5.0 - 6.7)	-	-	-	-	-	-
Tarsus	(20.8 - 22.9)	id	(17.4 - 21.3)	(18.7 - 20.8)	20.8 - 24.4	id	-	-	20.7 - 25.0	id
Weight	-	-	16.5 - 24	15.2 - 20.6	(17.7 - 24)	(16.5 - 20.6)	24 - 30	-	22.3 - 30.5	18.6 - 23.6

For all measurements, ad generally a little larger than juv. ¹ to skull. ² at base. ³ at distal edge of nostrils.

	<i>E. pusilla</i>		<i>E. rustica</i>		<i>E. pallasi</i>	
	M	F	M	F	M	F
Wing	69 - 78	64 - 75	74 - 85	70 - 81	69 - 78	64 - 75
Tail	51 - 58	46 - 55	48 - 59	(49 - 57)	57 - 66	57 - 64
Bill to skull	11.2 - 13.4	id	11.6 - 15.0	id	10.6 - 12.8	id
Tarsus	16.5 - 18.4	id	18.4 - 20.3	id	17.3 - 19.0	id
Weight	12.7 - 19.3	id	16.0 - 22.0 (25.8)	id	11.8 - 16.4	id



2 – intermediate group Bill slightly stronger and more arched than *schoeniclus*.

- *stresemanni* (Carpathians). Dark as *schoeniclus*.
- *ukrainae* (S Belarus, N Ukraine, S European Russia). Paler and more buff than *stresemanni*.
- *pallidior* (E European Russia, SW Siberia to Baikal). Large. Upperparts very pale sandy-buff. Rump grey-white in worn plumage. Underparts almost white.
- *incognita* (E Volga to N Kazakhstan). Bill as *tschusii*. Colour as *pallidior*.

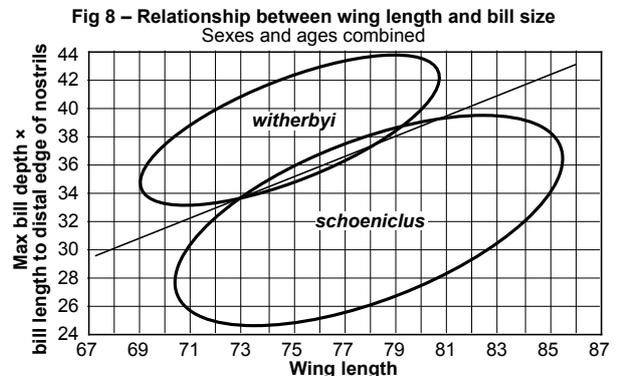
3 – group from S Bill thick (Fig 7). Four other sspp in Asia.

- *witherbyi* (Iberian peninsula, Balearics, Mediterranean French coast W of Camargue, perhaps NW Africa and Sardinia). Bill appearance (Fig 7 and 8). Plumage rather dark. **Spring F** Often with blackish-brown mask (resembling Eurasian Penduline Tit *Remiz pendulinus*).
- *intermedia* (Italy, coasts of ex-Yugoslavia; perhaps also from SW Ukraine to Caucasus and to Iran; extinct in Corsica). Bill as *witherbyi*. Flanks heavily striped rufous-brown (and not black as *schoeniclus*). Less dark than *witherbyi*.
- *tschusii* (from NE Bulgaria to Lower Volga). Bill strong with both mandibles of same depth. Paler than *schoeniclus*, especially on rump.
- *reiseri* (from S Balkans to Greece and to Turkey). Larger than *intermedia*. Bill even stronger and more arched than *witherbyi*. Plumage dark.
- *pyrrhuloides* (N Caspian Sea to Mongolia and S Kazakhstan). Bill as *reiseri*. Even paler than *pallidior*.
- *caspia* (E Transcaucasia to Iran).

4 – group from E E Siberia, Japan, NE China. Sspp *pyrrhulina* and *minor* (*minor* sometimes included within *E. pallasi*).

MOULT (Fig 9)

Juv – 2Y spring [3/5 spring] Partial postjuv from (late 06) mid-07 to 09 - early 10 (Fig 10), including body feathers, all



LC, MC and GC (exceptionally some GC retained), almost always CC, often alula 1, rarely alula 2 and alula 3, 0 to 3 T (often 2), 0 to 6 TF, very rarely S6, exceptionally 1 or 2 central or outer P. Very rarely, complete moult possible at least in S Europe. *Partial prebreeding in winter* (see Ad).

Ad [4/6 spring] Complete postbreeding from (late 06) 07 (mid-08) to 09 (early 10). Partial prebreeding from 02 (03) to 03 (05?), limited to part of head and throat (sometimes completely absent). Moult more common in M; in F, possible at least in some F of *witherbyi* (crown).

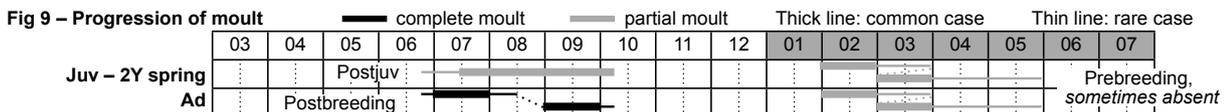
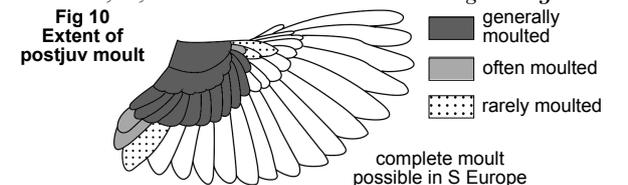
PNEUMATISATION Reliable until mid-10, useful until late 10, but often difficult to judge.

AUTUMN – AGE

Ageing with plumage is sometimes difficult and requires experience. In S Europe, complete postjuv moult possible: verify pneumatisation of skull and iris colour.

Juv [3] LC, MC and inner GC with buff fringe (becoming rufous). Speckled appearance. Rump without grey and very striated.

1Y [3] Juv TF worn from 09, but often moulted (see Moul). Longest P more worn than in ad at same period. *Moult limit within TF; T, alula and between T and S diagnostic.* Juv TF



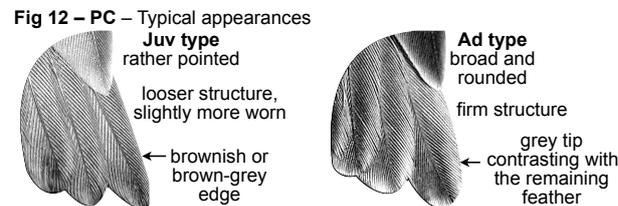
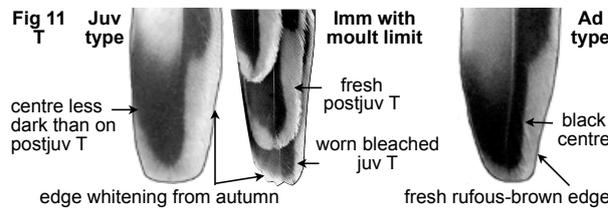
narrow and pointed, postjuv rounded. *Juv T* more worn with centre slightly less black than moulted *T* with black centre and less worn (Fig 11); however longest *T* often looking paler than other *T* of same generation. If all *T* moulted, often contrasting with *S6* with more worn fringe. Yellowish outer fringe of both shortest *juv T* becoming white during summer; these are diagnostic in early autumn (Fig 11) but not in winter because fringe of postjuv *T* is also bleached. Often a contrast within alula, easier to judge if only alula 1 is moulted. Usually, tip of *PC* with looser structure, slightly more worn, more pointed, with edge brownish or brown-grey more than grey (Fig 12): sometimes intermediate or confusing cases. Iris dark grey (difficult to judge; reliable until 12).

Ad [4] Flight feathers fresher, broader and darker than in 1Y. No moult limit (*T* may look slightly darker than *S* but without clear contrast of wear). Usually, *PC* rounded, wider with grey tip contrasting with remaining feather (Fig 12): sometimes intermediate or confusing cases. *TF* broader and rounded. Iris tinged rufous-brown slightly more contrast with pupil than in 1Y (difficult to judge).

AUTUMN – SEX

Start by ageing. Exceptionally, mix of feathers of *M* and *F* type on crown; combine several criteria.

For *juv* and 1Y, if known *ssp*, combination of wing length and weight sometimes useful (use with caution):

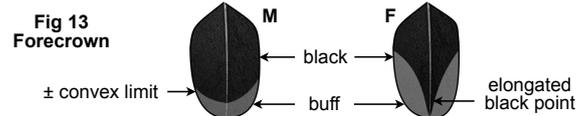


• *schoeniclus*: for 1Y with wing length between 75 and 79 mm, *F* if weight < 17.5, *M* if > 18.5. Following formula valid for 1Y in Scotland (5 % error): $M \text{ if } 132.31 - \text{wing} \times 1.33 - \text{weight} \times 1.8 < 0$

• *ukrainae*: for 1Y with wing length between 77 and 80 mm, *F* if weight < 18, *M* if > 20.5.

M Black bar straight or slightly rounded on feathers of fore crown (Fig 13) and throat (easier to observe on crown). Pure white collar across nape ± hidden by brown-buff tips. Rump largely (olive-) grey, ± tipped brown (huge overlap).

F Black bar reaching tip of feathers on fore crown (Fig 13) and throat (easier to observe on crown). Typically, no pure white visible on nape; sometimes, white or buff-white hidden by broad brown-buff tips. Rump largely brownish, sometimes with ± (olive-) grey (huge overlap).



SPRING – SEX

Rarely, head appearance of ad *F* may be similar to *M* (uniformly dark) but feathers being rather dark brown to blackish-grey instead of black; combine with criteria of autumn.

M Chin and throat black. Centre of throat black rarely with feathers tipped white. All ear-C black.

F Chin and centre of throat buff. Lower throat and breast streaked. Ear-C brown and speckled.

SPRING – AGE Criteria of autumn remain reliable but are more difficult to use because of wear. In late winter, outer *P* sometimes still not very worn in ad. Iris of 2Y sometimes darker and less brownish than in ad (very difficult to judge).

REFERENCES [Amato et al. 1994; Belda et al. 2009; Bertolero et al. 1992; Blasco Zumeta and Heinze 2013; Broad and Oddie 1980; Byers et al. 1995; Dal Molin and Joubert 1996; Demongin and Dmitrenok 1999; Duranton 2015; Ellrich et al. 2010; Jenni and Winkler 1994; Karlsson et al. 1985; Kasperek 1979b; Kilota 2014; Kitson 1979a; Kitson 1982b; Koenig and Schmitter 1998; la Puente and Seoane 2001; Mather 1979; Mills 1982; Neto et al. 2013; Ottenby Bird Observatory 2015m; Ouwkerk 1994; Persson 1999d; Pesente et al. 1997; Riddiford and Broome 1983; Schmitz and Steiner 2006; Shirihihi et al. 2002a; Svensson 1975; Vollot 2013b; Wallace 1976c; Walton and Walton 1999]

CORN BUNTING *Emberiza calandra* (*Miliaria calandra*)

(CORBU) Ring: 3.3 Incoloy (3.0 – 3.5)

MILCAL

WP = (2) 3 4 Incubation: F Parental care: F (M)

IDENTIFICATION Large. Dull colours. Streaked upperparts and underparts. No pure white on tail, only whitish edge on outer *TF*. Head without distinct pattern, except dark malar stripe. Legs and strong bill yellowish.

MEASUREMENTS Postjuv only. *Ssp calandra*.

	M	F
Wing	95 - 107 (109) ¹	(82 ?) 85 - 96 (98) ²
Tail	62 - 77	54 - 70.5
Bill to skull	(12.2?) 14.4 - 18.7	id
Tarsus	22.5 - 27.1	id
Weight	[34] (42) 43 - 65	[25] 31 - 47 (55.5)

¹ min = 91.5, doubtful. ² max = 106, doubtful.

VARIATION

Slight and mostly clinal variation; browner in W, greyer in E. Sometimes considered as monotypic.

- *calandra* (Europe, Asia Minor, N Africa, Canaries).
- *clanceyi* (W Ireland, W Scotland). Darker brownish.
- *buturlini* (from Near East to W China). Paler greyish.

MOULT

Juv [3] and ad [4] Complete from (06) 07 – early 09 to (mid-09) mid-10 – 11 [12]. Conversely to other European Passeriformes, *TF* finish growing after *P* and *S*.

PNEUMATISATION Useful until 11.

SUMMER – AUTUMN – AGE

Juv and ad moult completely. No difference in plumage after postjuv moult [EURING age code 2]. Following criteria reliable before the end of moult.

Juv [3] Fresh plumage paler and brighter than ad; yellowish-buff more than grey. Breast streaked more than spotted. Dark lateral stripes on sides of crown. Centre of *juv T* less dark with whitish to pale buff sharp distinct edge. *TF* narrow.

1Y [3] *Juv PC* edged white moulted last. In early autumn, a few pale edged *juv* feathers of upperparts, especially on rump, sometimes retained.

Ad [4] Plumage worn. Centre of *juv T* blackish-brown with diffuse rufous-buff edge, quickly whitening with wear.

SEX

F if BP. Following criteria not reliable for *juv*. See wing length. Within overlap area for wing length, 94 to 97 mm, combine weight and wing length. Some intermediates exist; criteria should be tested in various populations (following criteria reliable in NW of range).

M *M* if weight > 46. In winter, *M* if weight > 53.

F *F* if weight < 46. In winter, *F* if weight < 45.

Following formula tested in Spain (4 % error): $M \text{ if } 0.136 \times \text{wing} + 0.288 \times \text{weight} - 26.837 > 0$

REFERENCES [Blasco Zumeta and Heinze 2013; Byers et al. 1995; Campos et al. 2005b; Campos et al. 2006; Gauci and Sultana 1981b; Harper 1995; Morgan 2006; Prýs-Jones 1976; Villarán 1999; Weisshaupt and Vilches-Morales 2010]