Identification of Pine Bunting

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The nominate subspecies of Pine Bunting *Emberiza leucocephalos leucocephalos* breeds in a large part of Siberia from the western slopes of the Ural (55° E) east to the Pacific, including Sakhalin and the Kuril Islands (c 155° E). It ranges north to the Arctic Circle (66° N) and south to northern Mongolia (50° N); a disjunct population breeds further south in the Altai, Tarbagatay, Ala Tau and Tien Shan mountain ranges (45° N). A geographically isolated and apparently sedentary subspecies, *E l fronto*, breeds in northern Qinghai and Gansu provinces, China (Cramp & Perrins 1994, Byers et al 1995). The migratory nominate subspecies winters mostly in Afghanistan, Pakistan, north-western India, Nepal and northern China; less important wintering areas include northern Iran, the former Soviet states of Central Asia, Mongolia, and to a lesser extent Japan (Honshu and Hokkaido). Apart from being a regular breeder at the western Ural just inside the Western Palearctic, Pine Bunting is a rare but annual non-breeding visitor to other parts of the Western Palearctic, with records throughout the year, although the majority are in autumn (October-November) and winter. This species has been recorded in nearly every European country, with the majority of records coming from Britain, Belgium, France, the Netherlands and Slovenia (Lewington et al 1991, Mitchell & Young 1997). However, in Italy, it is rare but regular in autumn and winter (Occhiato 2003). Pine Bunting is a vagrant elsewhere in the Western Palearctic, except for Israel where it is rare but regular in autumn and winter (Shirihai 1996).

Pine Bunting is certainly the most frequent of the Siberian buntings to stray to western Europe. While the identification of males is generally straightforward, this cannot be said of females, especially in first-winter plumage. In particular, the identification of female Pine Bunting versus female Yellowhammer *E citrinella* has been discussed at length in recent years (Lewington 1990, Bradshaw & Gray 1993, Shirihai et al 1995), especially with regard to Yellowhammers apparently lacking yellow pigments (assuming that such individuals really exist). The separation of Pine Bunting from Yellowhammer is further complicated by the high frequency of hybridization between the two species in areas of sympatry on their Siberian breeding grounds. First-generation hybrids, especially males, are generally distinctive and do not lead to confusion. However, such hybrids are fertile, and back-crosses with members of one or the other species, or with other hybrids, lead to individuals in which evidence of hybridization is even more diluted, and often very difficult to detect in the field. In some cases, only careful in-hand examination can reveal such hybrid characters. For example, a study by Eugeny Panov (in Bradshaw & Gray 1993) revealed that out of 239 adult male Pine Bunting x Yellowhammer hybrids studied in the hand in western Siberia, as many as 58 were only identifiable as such by the yellow lesser underwing-coverts. A recent study by Panov et al (2003) clearly shows that such hybrids are increasingly frequent in the southern part of the area where these two species are sympatric, and are encroaching on the range of Pine Bunting in particular. This means that in the future, Pine Bunting x Yellowhammer hybrids may be recorded with increasing frequency in Europe.

In this paper, I present the knowledge I have acquired over the last few years on the identification of the nominate subspecies of Pine Bunting and its separation from Yellowhammer. Particular attention is paid not only to female plumages, which are notoriously difficult to identify in the field, but also to male plumages, which have received little attention in the literature (due to males being relatively easy to identify) and whose details are still little known. The paper is based on data gathered in seven years of studying Pine Buntings in Toscana, Italy, in the winters from 1995/96 to 2001/02. These studies involved over 110 individuals observed in the field between November and March, with particular attention being paid to their phenology, plumage, behaviour and vocalizations.

Size and structure

Pine Bunting is similar in size and structure to Yellowhammer, but given optimal views (at close range), Pine Bunting often appears slightly larger (by c 10%) due to its longer tail and bigger head; wing length is also slightly longer in Pine Bunting, but this is only useful in the hand.

Males in particular seem to show a slightly squarer head compared with Yellowhammer, due to the small crest that is often raised. The crest is also slightly further back on the head than in Yellowhammer, as well as very slightly longer. The primary projection is similar in both species, usually comprising two well-spaced primaries and a third, barely visible one. Pine Bunting, however, often shows a fourth primary tip barely projecting beyond the tertials, which Yellowhammer never shows (but beware of individuals with new tertials that are not yet fully grown). In Pine Bunting, the bill is usually slightly shorter but this is subject to variability and is only apparent in the hand. Flight style and behaviour are similar in both species.

Compared with Cirl Bunting *E cirlus*, with which it often occurs on its Italian wintering grounds, Pine Bunting is distinctly larger, as well as longer tailed. These structural differences are quite apparent in the field when the two species are seen together, especially in flight. Moreover, the primary projection is distinctly shorter in Cirl Bunting, which only shows two primary tips beyond the tertials.

Vocalizations

The song and calls of Pine Bunting are very similar in structure to those of Yellowhammer. Some Pine Bunting calls are slightly higher pitched than those of Yellowhammer but these differences can only be detected when the two species are together (or when comparing sonagrams). I had the opportunity to discern the subtle differences between the calls of these two species only in winter 2000/01, when at least four Pine Buntings and two to three Yellowhammers were present in the same flock at Macchia Lucchese, Toscana. In the same winter, I was able to make sound recordings of some Pine Bunting calls at the same site.

Song

In general, the song of Pine Bunting is shorter and slower than in Yellowhammer, with fewer, more evenly spaced initial notes. However, there is much geographic variation in songs (which are often extremely similar to Yellowhammer), so that the song itself is not very useful as an aid to identification. The main differences lie in the frequency of the initial notes, either evenly spaced or accelerating, and the presence or lack of the characteristic high-pitched final notes (typical of Yellowhammer's song) (Cramp & Perrins 1994, Panov et al 2003). For a more detailed analysis of the songs of both species, see Panov et al (2003).

Calls

The calls are very similar in both species and any possible differences are still poorly known.

1 Most typical contact call, short and dry, usually given when birds are perched or on the ground, described as *tchi'*. Slightly higher pitched than similar call of Yellowhammer.

2 Contact call, shorter, drier and lower pitched than call note 1, given both in flight and by perched birds, matching call 2a in Cramp & Perrins (1994), described as *tch'*.

3 Contact or alarm call, short and slightly raspy, given when perched, matching call 2b in Cramp & Perrins (1994), described as *dzjèu*. Very slightly higher pitched than similar call of Yellowhammer, and not always separable in the field.

4 Contact or alarm call, similar to preceding call but sweeter, slightly nasal, somewhat finch-like and almost certainly given under stress, as it is exclusively given by lone individuals and almost always in flight (but sometimes also when perched), described as *dsjìu*.

5 Short and dry call, usually given on the ground, rarely in flight; very similar to Corn Bunting *E calandra* calls, described as *pt* or *pt-l*.

6 Contact call given by flocks, given when perched, when taking flight, or in flight, described as *tch–rr, tch-r-l-r*.

7 Alarm call, given when perched just before taking flight, or when flushing out of fear (and often repeated in short series); the most characteristic call given by birds flushed by humans, described as *tcì–rrrrrrrr-l* or *ptì–rlrlrlrlrlrlrl*. Usually a little longer and slightly higher pitched than similar call of Yellowhammer.

Separation from female Yellowhammer

Much has been written in the last few years on the identification of female Pine Bunting and its separation from female Yellowhammer (Lewington 1990, Svensson 1992, Bradshaw & Gray 1993, Shirihai et al 1995, Harris et al 1996). However, descriptions in the literature generally refer to female plumage without taking age into account. For example, Bradshaw & Gray (1993) seemed to describe a first-winter female, while Shirihai et al (1995) and Harris et al (1996) describe the field marks of an adult-winter female, although some of the characters they mention are more typical of first-winter females. Typical adult females Pine Bunting or Yellowhammer, if seen well, do not generally pose serious identification problems. Doubts can, however, arise when dealing with first-winter females of both species, and with adult female Yellowhammers apparently lacking yellow pig-




1 Pine Bunting / Witkopgors *Emberiza leucocephalos*, adult male, Duna di Migliarino, Toscana, Italy, 5 March 2000 *(Daniele Occhiato)*. This individual shows a wide collar of dark grey spots. Note bright horn bill colour. **2** Pine Bunting / Witkopgors *Emberiza leucocephalos*, first-winter male, Duna di Migliarino, Toscana, Italy, December 1999 *(Daniele Occhiato)*. **3** Pine Bunting / Witkopgors *Emberiza leucocephalos*, adult-winter male, Duna di Migliarino, Toscana, Italy, 17 December 1995 *(Roberto Gildi)*. Note bright horn colour at basal corner of upper mandible, horn-coloured tones of lower mandible, conspicuous white borders to throat-feathers, and dark grey spots on white half-collar. **4** Pine Bunting / Witkopgors *Emberiza leucocephalos*, first-winter male, Duna di Migliarino, Toscana, Italy, December 1995 *(Emiliano Arcamone)*. Note worn juvenile tertials, pointed tail-feathers, juvenile primary coverts, grey-brown lesser coverts and heavily streaked crown with only a hint of white median stripe.

ments. Hybrids present a further problem. Below, I briefly list the characters that can be used to separate female Pine Bunting from female Yellowhammer (first-winter birds and those with reduced yellow pigments), indicating which of these characters are age related.

Structure
The few differences have been described above, in the paragraph on 'Size and structure'.

Plumage
A typical female Pine Bunting, at any age, shows no trace of yellow anywhere in its plumage. Even those individual Yellowhammers apparently lacking yellow pigments show at least a trace of yellow on the underparts, especially the lower belly, while the fringe of the outer web of the exposed primaries is always yellow.

Head
The head pattern of adult-summer female Pine




5 Pine Bunting / Witkopgors *Emberiza leucocephalos*, first-winter male, Duna di Migliarino, Toscana, Italy, 17 December 1995 *(Roberto Gildi)*. Note heavy dark grey-brown streaking on underparts, and conspicuous dark spots on upper breast. **6** Pine Bunting / Witkopgors *Emberiza leucocephalos*, first-winter female, Katwijk, Zuid-Holland, Netherlands, 25 November 1996 *(René van Rossum)* **7** Pine Bunting / Witkopgors *Emberiza leucocephalos*, adult-winter female, Duna di Principina, Toscana, Italy, January 2001 *(Daniele Occhiato)*. Note typical pale nape spot bordered by two dark stripes, and streaked crown with paler median stripe. **8** Pine Bunting / Witkopgors *Emberiza leucocephalos*, first-winter female, Duna di Migliarino, Toscana, Italy, December 1995 *(Emiliano Arcamone)*. Note uniformly streaked crown, brown cheeks and ear-coverts contrasting with the whitish supercilium, pointed tail-feathers, worn juvenile tertials, juvenile primary coverts and grey-brown lesser coverts.

Bunting is strikingly different from that of Yellowhammer, more contrasting and totally lacking yellow pigments. There are often reddish tones to the supercilium and throat. Pine Bunting's crown shows finer, neater dark streaking; these streaks are usually more evident on the sides of the crown, while on the centre the streaks are thinner and less conspicuous, on a paler background. The pattern is thus similar to that of males. In adult-winter female, the median crown-stripe is generally more streaked and less conspicuous, and can even be absent or nearly so. In first-winter female, it is usually absent, except for a small pale spot on the forehead, and the crown is uniformly streaked. In all plumages, Pine Bunting always shows a pale spot on the nape. This spot is greyish-buff with very faint dark streaking and is bordered by the dark lateral crown-stripes. Adult female Yellowhammer can show such a pattern but fainter; it is lacking in first-winter individuals.

In female Pine Bunting of any age, the super-

9 Yellowhammer / Geelgors *Emberiza citrinella*, first-winter female, Tauvo ringing station, Siikajoki, Finland, August 1991 *(Jari Peltomäki/Finnature)*

10 Yellowhammer / Geelgors *Emberiza citrinella*, female, Säppi ringing station, Luvia, Finland, May 1999 *(Juha Sjöholm/Finnature)*

11 Pine Bunting / Witkopgors *Emberiza leucocephalos*, adult-winter male, Duna di Migliarino, Toscana, Italy, 17 December 1995 *(Roberto Gildi)*. Note white crown and especially white forehead, with blackish-grey stripes.

12 Pine Bunting / Witkopgors *Emberiza leucocephalos*, first-winter female, Castricum, Noord-Holland, Netherlands, 8 November 1999 *(Guido O Keijl)*

13 Pine Bunting / Witkopgors *Emberiza leucocephalos*, first-winter male, Westenschouwen, Zeeland, Netherlands (trapped on 19 October 1987), 29 October 1987 *(Arnoud B van den Berg/Vrs Nebularia)*

14 Pine Bunting / Witkopgors *Emberiza leucocephalos*, first-winter male, Kennemerduinen, Bloemendaal, Noord-Holland, Netherlands, 4 November 1987 *(Arnoud B van den Berg/Vrs van Lennep)*

15-16 Hybrid Pine Bunting x Yellowhammer / Witkopgors x Geelgors *Emberiza leucocephalos x citrinella*, first-winter female, Lake Koybagar, Kostanay region, Kazakhstan, 1 October 2000 *(Jari Peltomäki/Finnature)*

17 Hybrid Pine Bunting x Yellowhammer / Witkopgors x Geelgors *Emberiza leucocephalos x citrinella*, first-winter female, Lake Koybagar, Kostanay region, Kazakhstan, 1 October 2000 *(Jari Peltomäki/Finnature).* Same bird as in plate 15-16.

cilium is clearly wider and paler than in female Yellowhammer, especially on the lore. In adult female Pine Bunting, the ear-coverts are rather pale, buffy-white, with dark upper and lower borders, while in first-winter females they are generally darker and browner and contrast markedly with the pale supercilium, throat, and lores. In female Yellowhammer, the supercilium does not contrast with the rest of the head as it is darker and of the same colour as the lores and the ear-coverts, so that the head appears darker and more uniform than in Pine Bunting, especially in immatures. The pattern of the malar stripe is a distinctive but often overrated character. In Pine Bunting, there is generally a series of four to six dark streaks in the malar area, which are thicker in adult-winter and first-winter, but more contrasting and conspicuous in summer plumage. Yellowhammer normally shows three to four such streaks, which are not as well marked and less contrasting. This field mark is, however, rather variable and difficult to judge in the field, and there is some overlap. The sub-malar stripe is always wider and paler in Pine Bunting, regardless of age.

In Pine Bunting, the nape and the sides of the neck are generally grey-brown with weak dark streaking, while on Yellowhammer they are usually more uniformly grey; this character is, however, quite variable and should not be relied upon, and it is only visible on birds in the hand.

In adult-summer female Pine Bunting, the bill shows horn tones at the base of both the lower and upper mandibles, which are never shown by Yellowhammer. In summer plumage, female Yellowhammer shows an entirely bluish-grey bill, while female Pine Bunting has a dark, bluish-black upper mandible contrasting with a paler lower mandible. Female Yellowhammer normally also shows this contrast in other plumages.

Underparts

Adult-summer female Pine Bunting shows many diffuse reddish spots on a whitish background that easily differentiates it from female Yellowhammer lacking yellow tones. The blackish spots on the upper breast are also distinctive and are always lacking in Yellowhammer. Finally, adult-summer female Pine Bunting usually (but not

18 Hybrid Pine Bunting x Yellowhammer / Witkopgors x Geelgors *Emberiza leucocephalos x citrinella*, male, Hodne, Klepp, Rogaland, Norway, 9 November 2000 *(Martin Eggen)*. Very like Pine Bunting, but note yellowish edges to primaries, indicative of hybrid origin.

always) shows a white half-collar on the upper breast, similar to that of the male. Female Yellowhammer sometimes also shows this half-collar but it is always much less conspicuous. In winter plumage, female Pine Bunting has lost most of its reddish tones (although close views reveal that some remain); the necklace of blackish-brown spots remains conspicuous and distinctive, while the whitish half-collar is much less evident and can be completely lacking. In first-winter female, the underparts are heavily streaked/spotted with dark brown and black on a whitish background, which becomes buffy towards the flank, and the dark necklace on the upper breast contrasts much less. The background colour is, however, always white or whitish, while Yellowhammer always shows some pale yellow tones, especially on the lower belly. The undertail is usually heavily streaked in female Yellowhammer. In female Pine Bunting, it is only weakly streaked (thinner and paler streaks), and the streaking can be absent altogether (although it is usually more evident in first-winters).

Wing

The wing colouration and pattern are similar in both species but female Pine Bunting completely lacks yellow pigments. In particular, one of the key characters to differentiate female Pine Bunting from Yellowhammer is the colour of the fringe of the outer web of the outer primaries, which is white in Pine Bunting and yellow in Yellowhammer. However, it is best not to rely on this character only, as some hybrids that are similar to female Pine Bunting can show a white margin to the outer primaries. The underwing-coverts are always white in 'pure' female Pine Bunting, and yellowish in female Yellowhammer. The lesser upperwing-coverts are usually pure grey in Yellowhammer and brownish-grey in Pine Bunting but this character is only visible in the hand. The tips of the median coverts are whitish in Pine Bunting and form a pale wing-bar (in fresh plumage only), while in Yellowhammer they are yellowish-buff (except for the eastern subspecies of Yellowhammer *E c erythrogenys*; note however that this subspecies may better be regarded as invalid because the discriminating characters are probably due to gene flow with Pine Bunting, cf Panov et al 2003). Finally, the lower fringes of the scapulars are normally brighter rufous in Pine Bunting than in Yellowhammer.

Rump

The rump pattern is similar in both species but the pale fringe to the feathers is normally white and rather broad in Pine Bunting, while it is narrower and dirty white or buff in Yellowhammer (however, the eastern subspecies of Yellowhammer *E c erythrogenys* is identical to Pine Bunting in this feature). These differences can only be seen on fresh, unworn birds in the hand.

Tail

In Pine Bunting, the rectrices never show yellow margins like Yellowhammer but instead show rufous-buff fringes at the base of the central pairs fading into white on the distal half. Pine Bunting shows more extensive white on the two outer rectrices (t5-6), and this is an important difference from Yellowhammer.

Hybrid problem

An important pitfall that has already been mentioned regards individuals that show the characters of Pine Bunting x Yellowhammer hybrids. First-generation hybrids, whether they

are phenotypically closest to Pine Bunting or Yellowhammer, do not usually present identification problems, as they show anomalous plumage features that immediately stand out (Panov et al 2003). For example, typical first-generation hybrids that are phenotypically closest to Pine Bunting usually show more white on the head, or have obvious traces of yellow on the head. First-generation hybrids that are phenotypically closest to Yellowhammer usually show obvious reddish markings on the head and chest.

These hybrids are fertile and when mating with pure Yellowhammers or Pine Buntings, or with other hybrids, they produce second- and third-generation backcrosses and so forth, of which the hybrid characteristics are so diluted as to often only be visible with the bird in the hand. Similarly, the occasional presence of phenotypic characteristics of Yellowhammer in a few individuals of an otherwise pure population of Pine Bunting could be due to gene flow of the former into the latter, in those areas where the two populations meet. One is then faced with the question whether to treat these individuals as members of the species they most resemble, or to treat them always as hybrids.

A classic example is that of an otherwise typical Pine Bunting showing yellow rather than white outer fringes to the primaries (cf Panov et al 2003: table 2). Because these fringes are normally white in the easternmost populations of Pine Bunting, where hybrids with Yellowhammer are extremely rare or altogether absent (Panov et al 2003), one can reasonably conclude that this character is typical of Pine Bunting. Therefore, the presence of yellow pigments on the primaries of an otherwise phenotypically pure Pine Bunting would certainly point to a hybrid origin. Such birds can however still be treated as Pine Buntings (albeit not 100% pure) as they are certainly at least second- or third-generation backcrosses (or at least the fruit of Yellowhammer's gene flow into the Pine Bunting population), of which the Yellowhammer genes are so diluted as to not significantly impact the individual's overall genetic complement (inheritance) (cf Oates 1996).

Byers et al (1995) illustrate four different types of male hybrids. For discussion of (presumed) hybrids Pine Bunting x Yellowhammer in Britain, see Lansdown & Charlton (1990), Riddington (1995) and Bowman (1996). The presence of hybrids wintering in Iran was documented by Aye & Schweizer (2003).

Plumage descriptions

Adult-summer male

The summer plumage is generally attained between late February and late March. Adult-summer male Pine Bunting is unmistakable as no other Palearctic bunting shows a similar white, brick-red and black face pattern. The face pattern consists of a black forehead that continues as two black lateral crown-stripes bordering a white crown and ending on the nape, a brick-red chin, throat and lore, as well as a broad supercilium which extends both above and below the eye surrounding the ear-coverts, and white ear-coverts and cheeks, both with a black border. Usually there is a hint of a greyish-white stripe just below the two black crown-stripes, extending from the bill to the nape, but in some individuals only behind the eye. On some individuals, the brick-red loral stripe shows a thin blackish upper border. The eye-ring is the same colour as the supercilium or slightly paler. The nape is grey-brown, with faint darker brown streaks. The mantle and back are pale reddish-brown, with darker brown stripes. The scapulars are the same colour as the mantle but show a broad, bright reddish-chestnut fringe, especially on the lower row of scapulars and have a conspicuous dark brown streak along each feather-shaft. There is a conspicuous white half-collar between throat and breast, shaped somewhat like a half moon. Odd individuals show a collar made up of small grey spots just below this half-collar, which is most visible when a bird raises its neck. This character may be age related and is quite variable; it is rarely reported in the literature (eg, Byers et al 1995) and is not illustrated in most modern field guides; only Svensson et al (1999) hint at it. The breast is brick-red, paler than throat and supercilium, variably flecked with darker brick-red spots, which continue in rows on the flank. In full summer plumage, breast and flank are even more intensely brick-red as the pale fringes to the feathers wear off. The rest of the underparts are white. The undertail-coverts, which are usually uniformly white, may show some faint dark streaks along the feather-shafts. The rump-feathers are uniformly reddish-chestnut, with a very narrow white fringe; the uppertail-coverts are slightly darker than the rump, with a narrow white fringe, and usually show a dark streak along the shaft. Later in the year (summer), rump and uppertail-coverts become more uniform as the narrow white fringes wear off. The primaries and secondaries are dark blackish-brown or blackish-grey, with thin, pale buff fringes; on the three to four outermost primaries, the outer web is fringed white. The primary coverts are dark brown with a pale greyish-brown fringe. The tertials and greater coverts are dark blackish-brown, with a broad rufous-buff fringe and thin pale grey-brown margins; the greater coverts often have a whitish tip, forming an indistinct wing-bar. The median coverts are rufous-buff, with much of the inner web being dark brown, and their fringes are whitish, forming a thin wing-bar. In late summer, the pale fringes on the wing-feathers are lost through wear and

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FIGURE 4 Pine Bunting / Witkopgors *Emberiza leucocephalos*, juvenile *(Daniele Occhiato)*. Note dark streaking on underparts and dark and dirty head, with hint of pale median crown-stripe.

the entire wing can look darker and more uniform. The lesser coverts are greyish-brown. The underwing-coverts are usually uniformly white. The rectrices are dark blackish-brown, with a pale rufous-buff fringe proximally, and a whitish fringe distally. On t5-6 (counted from the central rectrices outward), the distal portion of the inner web is white, and the outer web is blackish-brown fringed white. In summer plumage males, the bill is usually blackish-grey on the upper mandible with an orange-horn colouration at the basal corner, while the lower mandible is rather bright horn above blending into dark grey below (contra Lewington et al 1991, Jonsson 1992, Byers et al 1995, Beaman & Madge 1998, Svensson et al 1999). A very small percentage show a pale bluish-grey lower mandible. The iris is dark brown. The legs are pale and variable in colour, which can be fleshy-orange, brownish-yellow, or fleshy-brown; this is apparently not age related.

Adult-winter male

After a complete post-breeding moult (usually finished between the end of August and the first half of September), males usually look paler and 'cleaner' compared with summer plumage adults, due to the presence of pale fringes to many feathers. The following description applies to adult males just after this post-breeding moult, when they are in fresh plumage. Later in winter, the pale fringes to the plumage begin to wear off and the plumage is less well defined. They can then be considered to be in 'summer plumage' (see above). In winter plumage, the white areas on the head become less well-defined: the crown shows dark streaks because the feathers are fringed grey-brown, especially towards the nape, and the ear-coverts become dirty white and buff, especially the lower ear-coverts which show some weak dark streaks. The black crown-stripes and the black fringes to the ear-coverts

FIGURE 1 Pine Buntings / Witkopgorzen *Emberiza leucocephalos*, adult-summer male (upper) and female *(Daniele Occhiato)*. Note horn tones of bill of male and rusty tones of supercilium, throat, malar stripe, submoustachial stripe and breast of female.

FIGURE 2 Pine Buntings / Witkopgorzen *Emberiza leucocephalos*, adult-winter male (upper) and female *(Daniele Occhiato)*. Note paler and colder tones due to pale fringes of fresh feathers. Rump-feathers with wide white fringes. Lower mandible of male has lost horn tones almost completely.

FIGURE 3 Pine Buntings / Witkopgorzen *Emberiza leucocephalos*, first-winter male (upper) and female *(Daniele Occhiato)*. In both, note darker and dirtier plumages, both above and below, worn tertials, bleached exposed primaries and pointed, narrower and browner rectrices (especially central pairs). Dark spots on breast less contrasting due to darker underparts. In female, note uniformly striped crown and contrast between whitish supercilium and darker cheeks and ear-coverts.

become less well-defined due to greyish-brown and whitish fringes to the feathers. All the brick-red feather tracts on the head become noticeably streaky due to whitish feather fringes, although they are less evident in the malar region (and absent on the lore). The eye-ring becomes paler, whitish-buff, and contrasts more with the dark eye. The ill-defined pale stripe below the dark crown-stripes tends to become more conspicuous, greyish-beige with weak dark streaks, getting paler towards the nape. The white half-collar below the throat becomes poorly defined, streakier, and can even be completely absent. The greyish streaking on the upper breast becomes more evident, mixed in with the normal brick-red streaks. Breast and flank are less uniform, clearly paler, with greyish-brown and whitish tones especially evident on the flank. Later in the year, they become untidily streaked as the whitish fringes to the feathers wear off. The rest of the underparts are white or creamy-white. The undertail is uniformly white but some individuals show a central streak on the larger undertail-coverts. The back is slightly paler, greyish-buff, due to obvious pale fringes to the feathers, and blends into rufous-buff towards the rump. The dark streaks on the back thus become more obvious. The rump is as in summer plumage but with an obvious white fringe to each feather; the uppertail-coverts are dark brick-red with a blackish streak along the shaft and a broad white fringe. The wing is also as in summer plumage but the pale fringes to the tertials and coverts are more obvious, and there is a weak double wing-bar formed by the whitish tips to the greater and median coverts. The flight-feathers have obvious greyish-buff margins. The white on the outer web of the three to four outermost primaries is even more evident. The tail is again as in summer plumage but with even more obvious pale fringes. In winter plumage, the lower mandible loses its horn tones almost completely and becomes pale blue-grey above (retaining some faint horn tones), becoming darker below; the upper mandible is as in summer plumage. Iris and leg remain the same colour as in adult-summer male.

First-winter male

This plumage is very similar to that of adult-winter male and often difficult to distinguish if using only plumage clues; however, it is generally darker and 'dirtier', especially on head and underparts. The brick-red tones on the throat and supercilium are subdued due to the presence of many whitish (and some greyish-brown) feather fringes. On some individuals, the centre of the throat is distinctly paler. The blackish crown-stripes are less well defined, paler and streakier compared with adult-winter male; the crown shows distinct dark streaking, although at least a hint of the pale stripe typical of males is always visible, especially towards the nape. The ear-coverts are as in adult-winter male. The dark borders to the ear-coverts are usually better defined and contrast with the supercilium and throat; they often stand out as dark spots on the slightly paler face. The pale, greyish or buffy band above the supercilium is rather conspicuous, especially behind the eye. The eye-ring is buffy-white as in adult-winter male. The nape is greyish-brown with weak brown spotting. Breast and flank are dirtier than in adult-winter male, with a streakier pattern due to more dark markings in the feathers. The white half-collar is much smaller and usually shows dark streaking but it contrasts more with the darker throat and breast; the greyish-brown spots below it become more conspicuous and blend into the rufous-brown streaking on the breast, especially the central breast. The back is usually less pale (or darker) and more rufous-brown compared with adult-winter male, with heavier and more blurred dark streaking. Often, one can see two pale braces on the back, separated by two darker central bands, forming a pattern somewhat reminiscent of House Sparrow *Passer domesticus*. The wing is similar to adult-winter male. However, as the alula, tertials, primaries and primary coverts are usually retained during the post-juvenile moult, these look distinctly browner and more worn than the other wing-feathers. The rectrices are also usually retained; they are clearly more pointed, narrower (the central pair), browner and with reduced pale fringes. The rump and uppertail-coverts are again similar to those in adult-winter male, or somewhat duller. The bill is as in adult-winter male. The iris and leg are already of the same colour as in adult male.

Adult-summer female

The general pattern is similar to that of female Yellowhammer but lacks any trace of yellow pigment. Adult-summer female Pine Bunting has a greyish-brown crown, well streaked with dark brown, especially on the sides, and with a whitish central crown-stripe showing dark brown streaks. There is much individual variation in the width and intensity of the central crown-stripe (in some it can be almost absent, in others it is very conspicuous) and it is usually limited to the rear crown. A whitish spot above the nape is almost always present, usually conspicuously so. It is bordered by two dark stripes and is usually moderately streaked as in males, although this is less evident in females. In older females, this pale spot is often joined to the pale median crown-stripe, much as in males. The supercilium is broad and buffy-white (often with rusty spots), weakly streaked with brown, blending into the lore that is the same colour. The ear-coverts are whitish or pale buffy-white, bordered above and below by contrasting brown stripes. The throat and sub-malar region are whitish or creamy-white, with a variable quantity of rufous feathers often mixed in, separated by a series of four to five dark brown streaks on a pale rufous background. A small white half-collar is often present on the upper breast (but not always), and is much more reduced than in males. The eye-ring is whitish. The nape is greyish-brown, streaked with pale brown. The back is similar to that of adult-summer male, or even paler, browner and less rufous, streaked dark brown. Wing and tail are again similar to adult-summer male. The rump is however somewhat duller than in adult-summer male. Breast and flank are usually variably spotted and streaked with dark rufous-brown on a dirty

white background, with faint rufous-buff tones on the flank. The streaking is broader and better defined on the lower flank. The central breast shows numerous and conspicuous blackish-brown spots mixed in with rufous-brown spots. The rest of the underparts, including the undertail-coverts, are whitish. There are often, but not always, thin dark streaks along the feather-shafts on the undertail-coverts. The tail is as in adult-summer male but with the basal fringes of t1 buffish (less rufous). Finally, some older females show stronger rufous tones on supercilium, throat and breast. When such females also show a stronger pattern on crown and ear-coverts, they can resemble a male very closely.

Adult-winter female

This plumage is very similar to that of adult-summer female but generally paler and showing much less rufous on supercilium, throat and underparts. The entire crown is uniformly streaked dark brown on a pale grey-brown background; the pale median crown-stripe is much less conspicuous and can even be absent (in some older females, it can still be rather conspicuous but narrower and less well defined due to the presence of dark streaks). The rest of the head is similar to adult-summer female in pattern and colouration but without rufous on supercilium and throat, the latter being generally white or pale buff. Some feathers on throat and supercilium have a rufous base, which will become evident with wear in spring. The ear-coverts are pale greyish-brown. The whitish sub-malar area often shows weak dark streaks parallel to the malar stripe. The eye-ring is whitish, and the nape is greyish-brown with weak brown streaking. The breast is broadly and diffusely streaked/spotted with dark grey-brown on a whitish or buffy background, especially on the flank. The small dark grey spots on the upper breast become more conspicuous in winter plumage. Rufous tones typical of adult-summer female disappear, or are at best only visible at close range. The flank shows rufous-brown and dark grey streaks, most intense on the lower flank. The rest of the underparts are whitish, with the undertail-coverts usually showing weak shaft-streaks. The back and wing look paler and cleaner, with greyish-buff tones especially evident on the back due to the pale fringes of the feathers. Rump and uppertail-coverts are similar to those in adult-summer female but with conspicuous pale fringes to the feathers. The pale fringes to the rectrices also become more conspicuous. In winter, the lower mandible loses its horn tones almost completely and becomes pale blue-grey above grading to dark on the lower part; the upper mandible is as in summer plumage. Iris and leg are the same colour as in adult-summer female.

First-winter female

This plumage is very similar to adult-winter female but usually even duller and darker (although some individuals are paler), with the crown pale grey-brown and uniformly streaked with dark brown and lacking any hint of a pale median stripe; rufous tones to throat, supercilium and underparts are completely absent. The flank is diffusely streaked with dark grey-brown on a pale buff background; the necklace of dark spots on the upper breast is often inconspicuous as it contrasts less with the dark streaking on the breast. The back is similar to first-winter male. The scapulars are browner and less rufous compared with adult female, and the rump is paler, less rufous and with obvious pale fringes to the feathers. As in first-winter male, first-winter female also has alula, tertials, primaries, primary coverts and rectrices unmoulted, and they usually appear rather worn. In particular, the tertials look browner due to the loss of the pale fringe, the primaries and primary coverts look grey-brown without a pale fringe, and the rectrices have noticeably reduced pale fringes and are more pointed. The bill is similar to that of adult-winter female. The iris and leg are the same colour as in adult-winter female.

Juvenile

The following plumage description is based on, eg, Cramp & Perrins (1994), Byers et al (1995) and Beaman & Madge (1998).

Juveniles are very similar to first-winter females but generally duller and more buffy-brown. The head pattern varies somewhat according to sex: males in particular often show a hint of a pale crown-stripe on an otherwise sandy-brown crown heavily streaked with dark brown. The throat is whitish or very pale buffish with weak dark streaks. The nape is browner than in other plumages, with more heavy dark brown streaks. The back is rufous-brown with heavy, blurry blackish-brown streaks. The scapulars show browner, less rufous fringes. The median coverts show dark greyish-brown centres with pale, rufous-buff margins. Breast and flank have thick, blurry dark grey-brown streaks on a pale buff background. The rump is usually duller chestnut-red than in other plumages, with dark streaks. The undertail is buffy-white, with rather obvious dark shaft streaks on the larger undertail-coverts. The rectrices are pointed. The bill does not have horn tones or, at best, shows a hint at the basal corner of the upper mandible only. The iris and leg are of the same colour as in older birds.

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I would like to thank Ottavio Janni for translating the text from Italian to English. I would also like to thank Emiliano Arcamone and Roberto Gildi for supplying the photographs of Pine Buntings taken over numerous ringing sessions in December 1995 at Duna di Migliarino, Toscana.

Samenvatting

HERKENNING VAN WITKOPGORS In dit artikel wordt de herkenning van Witkopgors *Emberiza leucocephalos* besproken (met name in vergelijking met Geelgors *E citrinella*), hoofdzakelijk gebaseerd op studie van overwinterende Witkopgorzen in Toscane, Italië, in 1995-2002. Witkopgors is een regelmatige dwaalgast vanuit Siberië naar West-Europa, met name in de herfst en winter en overwinteren vindt in kleine aantallen plaats in Noord-Italië. Binnen het West-Palearctische gebied is de soort verder een dwaalgast

en alleen in Israël een zeldzame wintergast. Dit artikel behandelt achtereenvolgens grootte en bouw, zang en roep, onderscheid tussen vrouwtje Witkopgors en vrouwtje Geelgors en het probleem van hybriden Witkopgors x Geelgors. Het artikel eindigt met gedetailleerde beschrijvingen van de verschillende kleden, ingedeeld naar geslacht en leeftijd.

Verschillen in grootte en bouw zijn klein en van beperkte waarde in het veld. Witkopgors is vaak iets groter dan Geelgors met een iets langere staart. Verder zijn er subtiele verschillen in handpenprojectie, kopvorm en snavelvorm. Vergeleken met Cirlgors *E cirlus*, waarmee Witkopgorzen vaak samen worden gezien in Italië, is Witkopgors duidelijk groter en langstaartiger.

Er is weinig verschil in vocalisaties tussen Witkopgors en Geelgors; de verschillende roepen van Witkopgors zijn meestal iets hoger maar dit is alleen bij directe vergelijking vast te stellen. Subtiele verschillen in zang zijn wel vastgesteld maar nog onvoldoende onderzocht; daarnaast worden eventuele verschillen 'vertroebeld' door de variatie die met name de zang van Geelgors kent over het uitgebreide verspreidingsgebied van deze soort.

Het lastigste determinatieprobleem betreft het onderscheid tussen eerste-winter vrouwtjes Witkopgors en Geelgors en tussen adulte vrouwtjes Witkopgors en Geelgors zonder zichtbaar geel in het verenkleed (waarbij het bestaan van het laatste type evenwel niet onomstotelijk vaststaat). De belangrijkste verschillen zijn aanwezig in de tekening van de kop, snavel, onderdelen, vleugel, stuit en staart. De aanwezigheid van geel in deze veerpartijen duidt op Geelgors (of op een hybride); Geelgors vertoont altijd enig geel op de ondervleugeldekveren en in de rand van de slagpennen (met name van de buitenste handpen). De toppen van de middelste dekveren die in vers kleed een smalle vleugelstreep vormen zijn witter bij Witkopgors en meer geelachtig of zeemkleurig bij Geelgors. Witkopgors vertoont meer wit in de buitenste staartpennen dan Geelgors. De kleur van de onderdelen (met name de onderbuik) en van de lichte schubtekening op de stuit is wit bij Witkopgors en meer vuilwit tot geelachtig bij Geelgors. De ondersnavel is vaak meer vleeskleurig bij Witkopgors en blauwgrijs bij Geelgors.

Naast de herkenning van onvolwassen vrouwtjes vormt het 'hybrideprobleem' het grootste struikelblok bij het op naam brengen van Witkopgorzen. Hybridisatie treedt veelvuldig op waar de broedgebieden overlappen en hybriden kunnen overal worden aangetroffen waar zuivere Witkopgorzen zijn vastgesteld. Bij mannetjes zijn vaak duidelijke kenmerken van beide oudersoorten zichtbaar, met name in de kop- en borstekening. Bij onvolwassen vogels en vrouwtjes duidt de aanwezigheid van gele tekening, met name in de randen van de slagpennen en op de ondervleugel, op een hybride herkomst. Overigens is er door het veelvuldig voorkomen van hybridisatie tussen beide soorten sprake van een vermenging ('vervuiling') van de genenpolen ('gene flow') en hoeft de aanwezigheid van kenmerken van de ene soort in het verenkleed van de andere soort niet zonder meer op een (eerste-generatie) hybride herkomst te duiden. Bij overwegend zuivere vogels van de ene soort met een beperkte invloed van de andere soort is het een kwestie van definitie of deze vogels als 'hybride' beschouwd moeten worden of als 'niet 100%-zuiver' exemplaar van de in uiterlijke kenmerken dominante soort.

Bij de gedetailleerde kleedbeschrijvingen is een selectie van foto's opgenomen waarin de verschillende kleden worden geïllustreerd, waaronder een aantal hybriden Witkopgors x Geelgors.

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Hybridization between Yellowhammer and Pine Bunting in Russia

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Among several types of interspecific hybridization between bird species, two types, representing the two opposites of interchange of genes between hybridizing taxa, are most often encountered. These are: *1* occasional hybridization, essentially not influencing the gene pools of the parental species; and *2* introgressive hybridization, resulting in the local fusion of species at times. The first type of interrelationship is characteristic of pairs of distantly related species distributed sympatrically while the second one occurs as a rule in overlap zones of sister species where narrow hybrid zones are formed with a high proportion of hybrids. In the latter case, taxonomists do not normally regard the hybridizing taxa as full or good species and instead use for such taxa terms like megasubspecies, semispecies or paraspecies (for reviews, see Haffer 1986, 1992, Panov 1989, 1993).

More rarely, a third type of interspecific hybridization occurs which can be regarded as intermediate between the two types discussed above, ie, more or less regular interbreeding between 'good' species that have widely overlapping breeding ranges (figure 1). Because of the relative rarity of this type of hybridization, it remains poorly studied. Our long-term study of the relationships between Yellowhammer *Emberiza citrinella* and Pine Bunting *E leucocephalos* (hereafter referred to as *citrinella* and *leucocephalos*, respectively) may provide a new insight into this third type of hybridization. Another feature of this particular species pair is that the intensity of interbreeding is increasing, as *citrinella* is expanding its breeding range eastward across that of *leucocephalos*.

The present case seems to be of special interest because *1* this species pair may reveal causes of the breakdown of isolation barriers between two species that have evolved and diverged in spatial isolation, and *2* this species pair may provide insight in the influence of regular hybridization on gene pools and morphological and biological features of the parental species.

Subject of study, and material and methods

Clear differences in plumage and, more subtly, behaviour and osteology (Il'ichev 1962, Panov 1973, 1989) support the view that *citrinella* and *leucocephalos* are separate species. Moreover, it is quite possible that they may not be sister species since they originally belonged to different zoogeographical complexes. *Citrinella* is a typi-

FIGURE 1 Breeding ranges and observed populations of Yellowhammer / Geelgors *Emberiza citrinella* and Pine Bunting / Witkopgors *E leucocephalos*. I breeding range of *citrinella*; II breeding range of *leucocephalos*; III studied populations

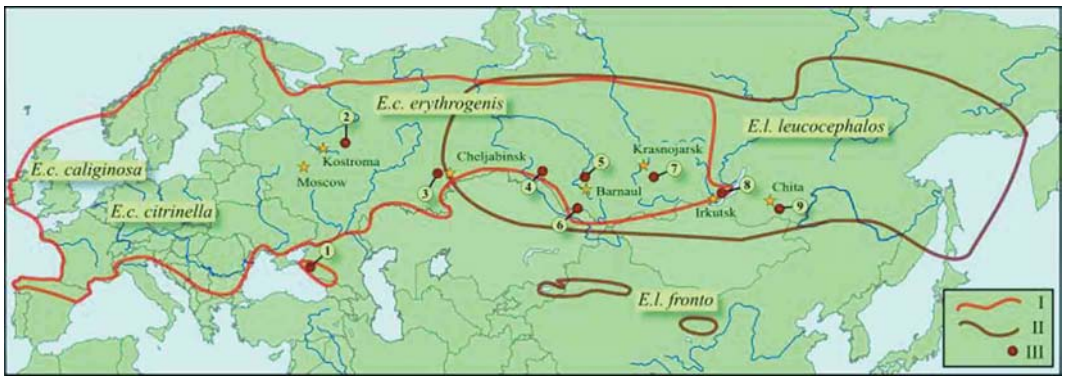


TABLE 1 Morphometrical characters of Yellowhammer / Geelgors *Emberiza citrinella* and Pine Bunting / Witkopgors *E leucocephalos* in and outside zone of sympatry (collection at ZMMU). [a] *E citrinella*: western Europe (Austria, Germany and Poland); *E leucocephalos*: Yakutia, Russian Far East (Amur region and Sakhalin) and China. [b] Baikal region. [C] t-test

Character	Species	Allopatric populations[a] mean ± sd (n) [min-max]	P[c]	Sympatric populations[b] mean ± sd (n) [min-max]	P[c]
Wing length	*E citrinella*	89.3 ± 2.08 (15) [86.5-93.5]	0.002	88.5 ± 1.94 (15) [84.0-92.0]	0.0001
	E leucocephalos	91.6 ± 1.95 (21) [87.5-95.0]		92.5 ± 2.50 (73) [86.0-97.0]	
Bill length (from forehead feathering)	*E citrinella*	11.1 ± 1.81 (15) [9.6-12.5]	0.08	11.5 ± 0.53 (15) [10.1-12.2]	0.0001
	E leucocephalos	10.7 ± 0.62 (21) [9.1 ± 11.9]		10.9 ± 0.46 (73) [9.9 ± 11.9]	

TABLE 2 Features of six phenotypic classes of males of Yellowhammer / Geelgors *Emberiza citrinella* and Pine Bunting / Witkopgors *E leucocephalos* in the hybridization zone. [a] Such birds occur almost exclusively in zone of sympatry and are practically absent in allopatric populations of *leucocephalos* (cf figure 4)

Phenotypic class		Character variation range (scores)				Phenotype characteristics
No	Name	I	II	III	(HI)	
0	pure *citrinella*	0	0	0	0	Typical *citrinella*
1	'*citrinella*'	0	0-2	0-2	1-3	Within normal variation of allopatric populations of *citrinella*
2	yellow hybrid	0	3-7	3-7	4-14	Intermediate colouration
3	white hybrid	15	0-5	0-5	15-25	Intermediate colouration
4	*'leucocephalos'*	15	6-7	6-7	26-29	Yellowish tinge on wing-feathers[a] and/or slight reduction of chestnut on head
5	pure *leucocephalos*	16	7	7	30	Typical *leucocephalos*

cal representative of the European avifauna of forest edges and shrubs of open river valleys (Shtegman 1938). In the course of its eastward expansion, *citrinella* has occupied vast open habitats in the Transural region and Siberia, Russia, up to the Lena basin and southern Transbaikalia. There, it colonized habitats originally occupied by *leucocephalos*, which is supposed to have originally inhabited the forest steppes of north-eastern central Asia (an isolated relict subspecies of *leucocephalos*, *E l fronto*, now only subsists in Hansu province, northern China; figure 1).

However, *leucocephalos* is also expanding its range. In this case, expansion has been north- and westwards, towards and into the breeding range of *citrinella*. It is believed that the colonization by *leucocephalos* of the southern taiga of central Siberia may have begun 2000-3000 years ago when scorched forests appeared because of human activity (Reimers 1966). *Citrinella* and *leucocephalos* became common inhabitants of the forest steppes and man-influenced landscapes of western Siberia.

In most parts of the secondary contact zones, there is apparently no segregation in biotope between the species although *citrinella* tends to inhabit shrub along forest edge and mountain steppe whereas *leucocephalos* is more prone to occupy sparse light forests where coniferous trees predominate (Sushkin 1914, Ravkin 1973, 1978, our data). However, *citrinella* and *leucocephalos* often share to some extent the same biotope in man-influenced habitat with its high mosaic of vegetation communities (Panov 1973). In such situations, all prerequisites are present for direct contact between *citrinella* and *leucocephalos* and consequently for hybridization.

Citrinella and *leucocephalos* are similar in size and structure and differ slightly, but significantly, in wing and tail lengths. Statistically significant differences are also found in bill length (table 1; see also Panov 1973). These characters are of no use in identifying hybrids, which have or should theoretically have intermediate measurements. However, a reliable discrimination of hybrids is possible due to a clear difference in plumage colouration in *citrinella* and *leucocephalos*. The

plumage of *citrinella* is characterized by the predominance of yellow and the almost complete absence of brown and black pigments. By contrast, in *leucocephalos*, the body plumage is mainly depigmentated while the characteristic features of the head colour pattern are determined by the distribution of chestnut and black pigments (figure 2; for details, see Mal'cev 1941). These differences are most pronounced in males but they are to some extent also present in females.

The present paper is based on an analysis of males only, both as specimens in museum collections and by field observations or examination in the hand after trapping, in different regions in Russia in 1967-71 and 1997-2001. We studied the collections at the Zoological Museum of the Moscow University (ZMMU), the Zoological Institute of the Russian Academy of Science (ZIRAS), the State Darwinian Museum (SDM), the Irkutsk University (IU) and the Museum of local lore at Chita (ChM). Only males were examined that had been obtained during the breeding season (April-August). Altogether, 962 specimens were examined: 333 males of *citrinella* from the allopatric parts of the breeding range, 289 males of the *citrinella* type from the zone of sympatry and 340 males of the *leucocephalos* type. An analysis of the collection at IU enabled us to examine the dynamics of the process of colonizing the Baikal region by *citrinella* between 1924 and 1993.

Outside the zone of sympatry, plumage colouration in both *citrinella* and *leucocephalos* is standard. However, a noticeable increase of intraspecific variability becomes apparent in the hybridization zone where individuals of intermediate colouration are often present, alongside birds with a plumage colouration of one or the other species. A combination of three characters can be used to describe this diversity in colour phenotypes. These characters are *1* the general background colour of body plumage and certain parts of the wings; *2* the chestnut-coloured 'moustaches'; and *3* the chestnut-coloured lore and ring around eye. We scored the expression of these characters using the following scale:

CHARACTER I General background colour of body plumage and certain parts of the wings. Score 0: yellow; score 15: white with yellowish areas; score 16: pure white. We did not use a more detailed classification because estimating the extent of the states intermediate between both extremes is inevitably subjective.

CHARACTER II Chestnut-coloured 'moustaches'. Score 0: completely absent; score 7: entire throat chestnut-coloured. Intermediate states and their scores are shown in figure 3.

CHARACTER III Chestnut-coloured lore and ring around eye. Score 0: absent; score 7: area around the eye up to the back of the head and the lore chestnut-coloured. Intermediate states (score 1-6) are shown in figure 3.

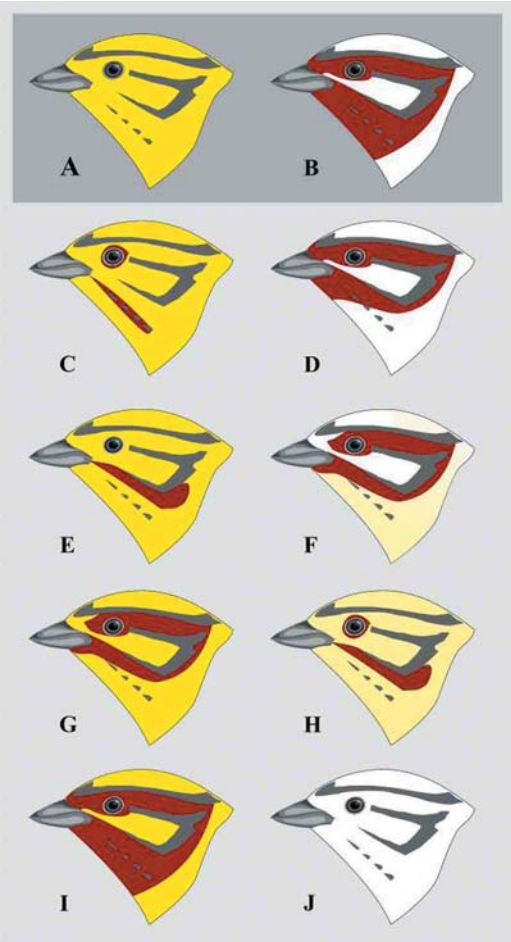


FIGURE 2 Head colouration of males of Yellowhammer / Geelgors *Emberiza citrinella* (a) and Pine Bunting / Witkopgors *E leucocephalos* (b) and of variants of intermediate (hybrid) phenotypes (c-j) (from Panov 1989)

To deal with the spectrum in all three characters, we distinguished six phenotypic classes (table 2). We presume birds of intermediate colouration to be hybrids (classes 2-3; table 2). For birds that are predominantly yellow (classes 1-2; table 2), correlation between characters II and III is estimated as r=0.56, while for the so-called

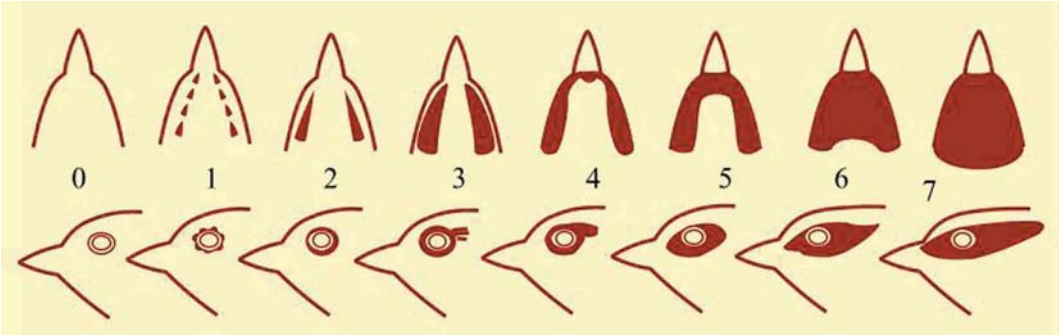


FIGURE 3 Numerical score of colouration of throat (above) and around-orbital plumage (below) of males of Yellowhammer / Geelgors *Emberiza citrinella* and Pine Bunting / Witkopgors *E leucocephalos* and their hybrids (from Panov 1989)

'white hybrids' (class 3; table 2), it is r=0.64. Birds with the general appearance of *citrinella* can be attributed to phenotypic classes 1 and 2, and 'white hybrids' to class 3. The differences are not statistically significant, with a mean value of r=0.6 for the three classes. The third character (character I) seems to be inherited independently from the other two. We conclude that, for a concise description of a birds' colouration, a hybrid index (HI) can be used representing the sum of values of all three characters.

Former geographical variation in bunting colouration was analysed by studying museum collections. Examination of the current situation was carried out between 1987 and 2001 in the Kostroma district and the Stavropol' region (breeding range of *citrinella* outside the zone of sympatry), in the Chelyabink, Omsk, Novosibirsk and Krasnojarsk districts and in the Altai region (secondary contact zone) and in the Chita district (breeding range of *leucocephalos* outside the zone of sympatry). The locality of the study sites is shown in figure 1. At all sites, we mapped territories of singing males *en route* and/or at plots, and trapped as many birds as possible for examination in the hand. Birds were trapped using nets and other types of traps, and lured in by playing tape-recorded songs as well as using a tame male kept in a small cage. Trapped birds were measured and photographed and their HI value was estimated. Blood samples for genetic analysis were taken. Altogether, 199 individuals were observed of which 66 were trapped.

Tape-recordings of songs collected from individually identified birds were taken with the use of portable taperecorder Sony DAT TCD-D8 with 'long-gun' microphone Sennheiser K6/ME67. Acoustic data-processing was carried out in the Laboratory of Comparative Ethology and Biocommunication of the Institute of Ecology and Evolution Russian Academy of Science and in the Scientific Department of SDM, using computer spectrum analysers Avisoft and Spectralab. In the repertoire of each male, usually two or three stereotype song variants were present. Therefore, only part of the phonograms, representing different variants, were taken as research subject. Altogether, 300 song variants obtained in seven regions in and outside the zone of sympatry from 173 males (of both *citrinella* and *leucocephalos* and hybrids) were analysed. We recognized 16 characters in the song structure and examined their occurrence in different regions, using factor analysis and one-way ANOVA.

Results

General overview of phenotypic composition of populations in and outside zone of sympatry before the 1960s

Analysis of the phenotypic composition of populations of *citrinella* and *leucocephalos* is based on examination of specimens that were collected mainly up to the 1950s. The largest samples were gathered before 1929 (such as P A Velizhanin's collections which have been supplemented by V A Khakhlov).

Analysis of specimens collected in the breeding range of *citrinella* outside the contact zone showed that the proportion of males with chestnut pigment in the head plumage apparently increases eastward. This is reflected in an increase eastwards of both the percentage of the so-called 'yellow hybrids' and the mean HI value (figure 4a). The same tendency, although less

obvious, occurs in the zone of sympatry. Also, the proportion of males of the *citrinella* phenotype (class 0 and 1) decreases from 60% in the Transural region to 50% in Transbaikalia. In most populations in the zone of sympatry, the proportion of males with a HI value of 3-14 is c 30% (figure 4b). We assume this category of presumed hybrids to include both F_2 hybrids and descendants of various backcrosses.

Everywhere in the sympatry zone, white hybrids are found in which both the yellow colour of the body plumage and the chestnut colour of the head plumage are reduced. This other phenotype differs in character I from *citrinella* and in character II from *leucocephalos*. Samples mainly collected in the first half of the 20th century showed that the proportion of such birds in most parts of the zone of sympatry is c 20% relative to the combined samples of *citrinella* and yellow hybrids (phenotypic class 0-2). The concentration of white hybrids is the highest in the foothills of the north-western Altai but much lower on the eastern edge of the zone of sympatry (figure 4b). In the allopatric populations of *citrinella* and *leucocephalos*, such males are absent or exceptionally rare (a single specimen from the Chita district is present in the collection at the ZMMU, labelled N R-60808).

Similarly, the percentage of males with the general appearance of *leucocephalos*, with a small amount of yellow pigment in the flight-feathers (Zarudnyi 1913, Panov 1973), varies geographically. They are regularly found in western Siberia but they are rare further east, in central Siberia (figure 4b).

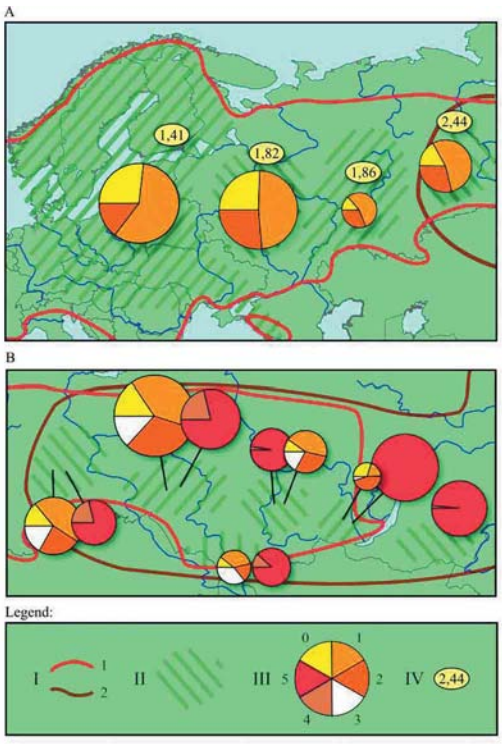
Phenotypic composition of populations in and outside zone of sympatry since the 1960s

Recently, we studied the same sites after an interval of 30 years, namely in the late 1960s and in the 1990s. Our study showed that the situation in the contact zone may change noticeably (Panov 2001). Below, we will discuss the present state (since the 1960s) of the mixed populations of *citrinella* and *leucocephalos* in different parts of the zone of sympatry, mainly based on the material obtained during the 1980-90s. The results of the data gathered before the 1960s have deliberately not been included in the analysis below.

1 Western Siberia: Transural region (figure 1: point 3)

In the central Ural (Sverdlovsk district), *citrinella* is a common breeding bird (17-60 pairs/km^2) whereas *leucocephalos* is rare and locally distributed, reaching the highest density (21 pairs/km^2) in forested *Sphagnum* bogs where *citrinella* is absent. Where both species occur in the same biotope, the ratio of numbers of pairs of *citrinella* and *leucocephalos* is c 50-100 and 0.5-8 respectively (Karjakin et al 1999). In the southern Ural (Chelyabinsk district), *citrinella* inhabits different types of light groves in forests and forest steppes, reaching the highest density (57.6 pairs/km^2) in insular birch forests (Zakharov 1998). *Leucocephalos* was observed only a few times in the eastern part of the Chelyabinsk district (V D Zakharov pers comm).

FIGURE 4 Phenotypic composition of populations of buntings from allopatric part of breeding range of Yellowhammer / Geelgors *Emberiza citrinella* (**A**) and from secondary contact zone of *citrinella* and Pine Bunting / Witkopgors *E leucocephalos* (**B**). Analysis of museum collections: **I** breeding ranges of *citrinella* (1) and *leucocephalos* (2); **II** region of sample; **III** proportions of different phenotypic classes of buntings in sample. Circle area indicates sample size (max-n=130; min-n=20). Phenotypic classes (cf table 2): 0 pure *citrinella*; 1 *'citrinella'*; 2 yellow hybrids; 3 white hybrids; 4 *'leucocephalos'*; 5 pure *leucocephalos*. **IV** mean HI value of sample



In June 2000, we conducted a pilot count at two localities (c 70 km from each other) in the Chelyabinsk district. The birds inhabit the edges of insular birch forests. All 12 males studied had the general appearance of *citrinella*. In seven of them, the scores of character II (chestnut-coloured 'moustaches') were estimated visually as 0, in two males as 1, in two others as 2 and in one male as 4 (mean score 0.8). The ratio of *citrinella* and yellow hybrids was 91 to 9, not significantly different from what is found in the allopatric part of the breeding range of *citrinella* (as in north-western European Russia and the Caucasus).

2 Western Siberia: Irtysh region (figure 1: point 4)
In June 1997, in the Omsk district, the area near the Malye Chany lake and the isle of Uzkoredkiî in the Bol'shie Chany lake were surveyed. Buntings were practically absent in shrubs and small patches of birch forest at the first locality. Only one singing male *leucocephalos* – showing no signs of hybrid origin – was seen and trapped (the first record of this species in the area). However, a rather dense population of *leucocephalos* was found at the second locality that consisted of middle-aged birch forest with sparse undergrowth. Seven out of eight males observed here appeared to be typical *leucocephalos* (one trapped individual did not show a sign of hybrid origin) while the eighth was of the white hybrid phenotype (with a HI value of 24, yellow colours were completely absent). According to a member of the ornithological expedition of the Novosibirsk Institute of Systematics and Ecology, one 'yellow bunting' was seen here.

3 Western Siberia: eastern parts (figure 1: point 5)
In the late 1960s, in the vicinity of the Novosibirsk Scientific Centre, *citrinella* and *leucocephalos* were common along the edges of insular birch forests (the so-called 'kolki') alternating with cultivated fields. In the second half of April 1967, in an area of c 2.2 km^2, 22 singing males *leucocephalos* and eight *citrinella* were counted. In 1967, at an experimental plot where the species shared a common habitat, at least seven pairs of *leucocephalos* and two pairs of *citrinella* bred. In addition, a male of the white hybrid phenotype held a territory. In other words, *leucocephalos* predominated so that the ratio of *citrinella*, apparent hybrids and *leucocephalos* was 20 to 10 to 70 (Panov 1973).

After 30 years, the situation in the region turned out to be different. In 1997, a full count of singing males was conducted here between 9 and 17 June in an area of c 4 km^2; 20 out of 24 individuals could be attributed to the spectrum from *citrinella* to yellow hybrids. All had chestnut-coloured 'moustaches': there were no individuals with score 0 for character II in the sample. The four other males appeared to be white hybrids. Individuals with the general appearance of *leucocephalos* were not found. In 14 trapped yellow males, the HI value varied from 1 to 12 (with a mean of 4.9). The ratio of the HI values 1-2, 3-4 and 5-12 was 36 to 14 to 50. These figures indicate a much higher level of introgression compared with those of an analysis of the museum specimens collected in the first half of the 20th century (see below, table 4).

Comparing the results of 1967 and 1997 allows us to suppose that, in this region, the process of intensive interbreeding is in progress, resulting in the disappearance of the *leucocephalos* phenotype.

4 North-western foothills of Altai mountains (figure 1: point 6)
Fragmentary data on the phenotypic composition of the local population were obtained in the north-western foothills of the Altai mountains in early June 1971 during a car journey across the region in the north-west of Ust'-Kamenogorsk (from Verkhne-Ubinskoe, Zmeinogorsk to Pospelikha; altogether c 250 km). At Verkhne-Ubinskoe, only *leucocephalos* were observed. In the vicinity of Zmeinogorsk, males with a high HI value (with a white ground colour of plumage) predominated quantitatively over yellow males of the *citrinella* phenotype. All four males collected turned out to be obvious hybrids. Three of them, originally identified at a distance as *leucocephalos* in the field, appeared to be white hybrids with HI values of 17, 20 and 23; the fourth was a yellow hybrid with a HI value of 6. Only one out of 14 observed males had the appearance of a typical *leucocephalos*.

Counts in the vicinity of Zmeinogorsk on 9-25 June 2001 (ie, 30 years later) gave similar results. Out of 42 males observed, 20 (48%) could be identified as pure *citrinella*, 10 (24%) as yellow hybrids and 12 (28%) as white hybrids. Typical *leucocephalos* were not found. The mean score of character II in males with a yellow background was 2.0, compared with a value of 0.6 in populations of *citrinella* from regions far away from the contact zone.

It is of interest to compare these results with data obtained in the same region in the 1900s (Polyakov 1915). In that paper, a list of speci-

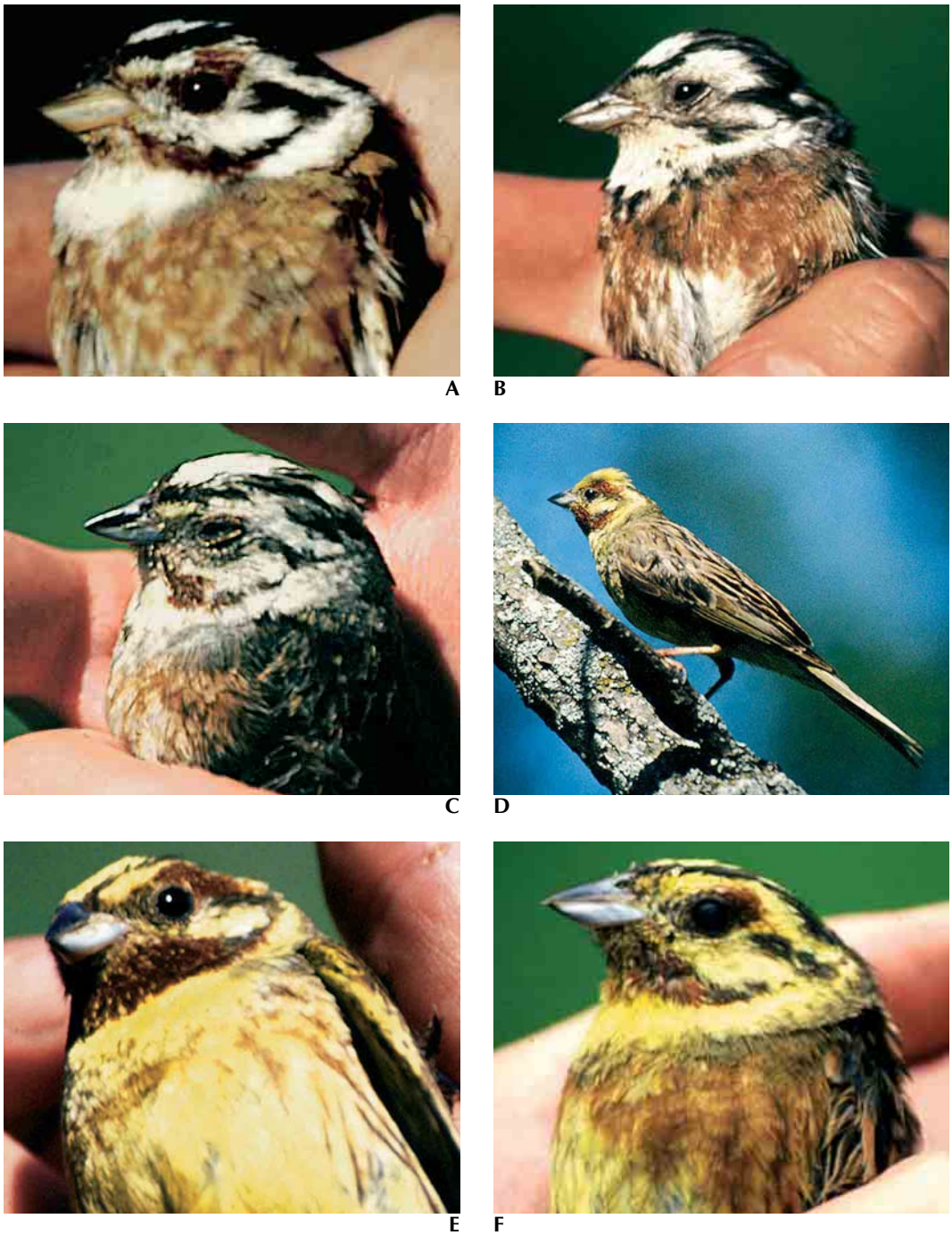


FIGURE 5 Hybrids Pine Bunting x Yellowhammer / Witkopgors x Geelgors *Emberiza leucocephalos x citrinella*. Examples of 'white hybrid' type (**A-C**) and 'yellow hybrid' type (**D-F**), photographed by the authors at various locations in Siberia, Russia.

mens collected by A P Velizhanin in 1905-10 is presented. The sample contained seven males of the *citrinella* phenotype and one white hybrid (HI value of 16-17). Although there are few data, they permit us to suppose that in the north-western foothills of the Altai mountains the process of intensive interbreeding is in progress, resulting in the gradual disappearance of the *leucocephalos* phenotype, just as in the vicinity of Novosibirsk.

5 Southern parts of central Siberia (figure 1: point 7)
According to Sushkin (1914), in the 1900s, *leucocephalos* was a common bird inhabiting all types of light forests and their edges. *Citrinella* was said in this work to be a rare species found only at one locality in 1913 (the upper reaches of the Oya on the northern slopes of the western Sayan mountains). Tugarinov (1915) suggested that '*citrinella* nests in the forest-steppe part of the Minusinsk region' but gave no quantitative information. In the same paper, there is a description of a white hybrid collected in this region in 1913.

It can be assumed that, just at that time, dispersion of *citrinella* eastwards into the breeding range of *leucocephalos* started, because, now, *leucocephalos* has completely been replaced by *citrinella* in the foothills of the eastern Sayan mountains near Krasnoyarsk (Rogacheva 1992).

Between 8 and 26 June 1999, an attempt was made to estimate the phenotypic composition of the populations of buntings at two localities, separated by c 300 km, in the Krasnoyarsk region at the opposite borders (western and eastern) of the Minusinsk trough. These two are *1* the vicinity of the Balyksu railway station in the eastern foothills of Kuznetsk Alatau', and *2* the Mana railway station (the Mana basin on the western slopes of the eastern Sayan mountains). In total, 21 males were observed; 14 (67%) were identified as *citrinella* and six (29%) as apparent hybrids (three yellow and three white hybrids). Only one male had the appearance of *leucocephalos*. The percentage of phenotypic hybrids in this sample is slightly lower than in museum collections from this region but the differences are within the limits of the statistical error (chi-square test, P=0.23).

6 Baikal region (figure 1: point 8)
An analysis of the collection at the Irkutsk University showed that *citrinella* started to visit the Baikal region in the mid-1920s. It became a common inhabitant only in the 1950s. At present, *citrinella* continues to expand its breeding range further east, occupying man-influenced landscapes along the Baikal-Amur Railroad or Baykalo-Amurskaya Magistral (BAM) (Y A Durnev pers comm). Now, in the Irkutsk district, birds of the highly variable *citrinella* phenotype are common in secondary shrub in river valleys. Where primary vegetation associations (such as pine and larch forests) remained, *leucocephalos* predominate in number. In the absence of such habitats, *citrinella* and *leucocephalos* coexist in the same biotope and form mixed populations inhabiting sparse mixed forest with the predominance of birch.

Between 3 May to 26 June 1998, counts and trapping of buntings were carried out at three localities in the Irkutsk district. At locality 1 (in the vicinity of Sarma on the north-eastern shore of Lake Baikal), the *citrinella* phenotype inhabits willow-beds along stream and riverbeds while *leucocephalos* occupy sparse larch forests on dry slopes of the lower mountains. The mixed population of buntings was surveyed in an area of c 30 ha where these two habitats were contiguous. Here, 17 males of the *citrinella* phenotype were observed and six males of the *leucocephalos* type. At locality 2 (in the vicinity of Batkhaî, Ust'-Ordynsky Buryat National Okrug), *citrinella* and *leucocephalos* are common along the edges of secondary birch and mixed forests. In an area of 2 km^2, territories of 20 yellow males and 17 males of *leucocephalos* were mapped. At locality 3 (Kultuk at the extreme southern point of Lake Baikal), long-term human influences resulted in the complete replacement of coniferous trees by birches. A sparse mixed population of *citrinella* and *leucocephalos* inhabits the edges of these deciduous forests. Territories of four *citrinella* and six *leucocephalos* were mapped.

At all three localities, a total of 16 yellow males and 10 males of *leucocephalos* were trapped. In the yellow males, the ratio of the HI values 0-2, 3-4 and 5-12 was 41 to 18 to 41, which closely corresponds with the respective figures estimated for the population in the vicinity of the Novosibirsk Scientific Centre. At the Sarma locality, the mean HI value was 3.8 (five trapped yellow males) and at Batkhai 4.5 (11 males); for the total sample, the mean HI value was 4.4 (16 males).

It is remarkable that in these mixed populations, where the percentage of the yellow hybrids was high (59%), no trapped male *leucocephalos* showed any sign of hybrid origin. Also, no hybrid characters were observed in c 30 males

leucocephalos studied at close distance in the field with 12x binoculars. In the collection at the Irkutsk University, 132 specimens of *leucocephalos* were examined (91 adult males, 30 adult females and 11 unsexed subadults). Only one male specimen (collected in the Echirit-Bulagat area on 21 April 1974, labelled N 3242) turned out to be an apparent intermediate of the white hybrid phenotype. In other words, in this region at the extreme eastern border of the secondary contact zone, effective isolation barriers continue to operate, supporting the view that *citrinella* and *leucocephalos* are separate species.

Isolating barriers and possible causes of their breakdown

Participation of mixed pairs and hybrids in reproduction

The viability of the offspring reproduced by a mixed pair was proven experimentally by crossing *citrinella* and *leucocephalos* in captivity. Two viable males of the white hybrid phenotype (with HI values of 17-18 and 18-19, judging from photographs presented in the paper) were reared by a pair of a female *citrinella* and a male *leucocephalos* (Löhrl 1967).

Several mixed pairs were found in the vicinity of Novosibirsk. On 27 April 1967, a female *citrinella* paired with a male *leucocephalos* was seen nest-building. All five eggs hatched and nestlings developed successfully until the nest was destroyed. Another mixed pair, also consisting of a female *citrinella* and a male *leucocephalos*, was present c 350 m away. The female started nest-building but the nest succumbed to a forest fire after which the pair possibly separated (Panov 1973).

In the same region, Balatsky (1992) observed three mixed pairs: two in 1984 and one in 1986. A pair consisting of a male *citrinella* and a female *leucocephalos* bred at c 150 m distance from the territory of a pair consisting of a female *citrinella* and a male *leucocephalos*. The nests of both mixed pairs contained five eggs (their fate remained unknown).

Judging from some data, individuals of hybrid origin are fertile (cf Byers et al 1995). On 7 June 1968, a moving brood was seen accompanied by a female with the general appearance of *leucocephalos*. In-hand examination of this individual showed the presence of yellow on some parts of the plumage. This female was paired with a male of the *citrinella* phenotype (Panov 1973). In 2001, in the vicinity of Zmeinogorsk, fledglings were seen in the territories of two male yellow hybrids (with a HI value of 13) and one male white hybrid (with a HI value of 24). In four males (three white hybrids and one yellow hybrid) collected in the same area on 5 June 1971, the testicles were greatly enlarged.

Isolating role of species-specific colour pattern

It seems likely that during the early stages of secondary contact between *citrinella* and *leucocephalos* the main isolating factor impeding hybridization was a clear distinction in their colouration. This idea is supported by data obtained in the Baikal region, part of the native breeding range of *leucocephalos*, colonized only c 50 years ago by large numbers of birds with the general appearance of *citrinella*. During our field-work in 1998, all observed males had conspecific partners. Females were seen in 11 (38%) out of 29 territories of *leucocephalos* males under regular observation but only in nine (22%) out of 41 territories of males of the *citrinella* phenotype (in three more territories, there were fledglings but females were not seen). These figures suggest that yellow males had difficulties in obtaining a partner in this region that had only recently been colonized by them. There is good reason to think that a substantial proportion of the *citrinella* males and one male of the yellow hybrid phenotype remained unpaired until at least mid-June. All this indicates the existence of an effective isolation barrier that prevents regular interbreeding between native *leucocephalos* and birds of the *citrinella* phenotype at this site.

In a field experiment, a cage with a *citrinella* male was placed in the territory of a pair of *leucocephalos*, while simultaneously playing the song of *citrinella*. The territory owner approached the cage in response to the acoustic signal but lost interest in the 'intruder' just when the intruder became visible. Also, simultaneous singing of *citrinella* and *leucocephalos* males in the same tree without observed aggression was observed. Such a situation is in a strong contrast with the overt aggressiveness of a male towards a conspecific male placed in the territory of the resident. In such cases, territorial males of both *citrinella* and *leucocephalos* even fiercely attack a crudely manufactured dummy of the conspecific male (Panov 2001).

Species-specific songs as possible isolating factor

In general, songs from allopatric populations of *citrinella* and *leucocephalos* are structurally similar. Structural differences are retained in the zone

of sympatry although the differences become less pronounced. It may be that an accurate discrimination between its own and the other species' song may be absent so that these acoustic signals alone do not lead to a reliable identification of conspecifics. As field experiments in the Kostroma district (figure 1: point 2) showed, a positive reaction (ie, the approach to the sound source) by *citrinella* males can be observed in response to the playback of *leucocephalos* songs recorded in the zone of sympatry (Novosibirsk area; figure 1: point 4). In the latter region, most trapped males of the *citrinella* phenotype were attracted by using song from *leucocephalos* males from the Baikal region.

Song dialects and geographical variation of songs

Citrinella In the native parts of the breeding range, there are three main song types. The simplest one is represented by a homotypical series of short uniform notes and an elongated final note devoid of amplitude and frequency modulations. This final element is habitually designated as the *teee* note (eg, Cramp & Perrins 1994), with the song type therefore being known as the *teee* song type (figure 6a). In the second type, there is a short note of high frequency with several harmonics but without frequency modulation between the initial series and the *teee* note (the so-called '*zi*' note). This song type is thus designated as *zi-teee* (figure 6b). The third song type differs from the first by the presence at the end of the construction of an elongated sound of high frequency with a harmonic structure and a gradual frequency drop towards the end of the signal (the *sii* element). This song type is therefore known as *teee-sii* (figure 6c).

Males may sing all three song types incompletely, without the final *teee*, *zi-teee*, *sii* or *teee-sii* part. A similar use of incomplete songs is true for *leucocephalos*.

The content of the individual male song repertoire varies geographically with respect to the presence of the three song types given. These characteristics, as well as minor quantitative variations in the parameters of the main constituents of the song (the series of homotypical notes, as well as the *teee*, the *zi-teee* or the *teee-sii* element), determine the local song dialect. In all populations of *citrinella* in the zone of sympatry studied by us, song types 1 (*teee*) and 2 (*zi-teee*) are both found, with a local predominance of one or the other song type (cf Wallschläger 1983). However, in the Kostroma and Chelyabinsk districts and in the Caucasus (figure 1: point 1-3), song type 2 is absent. All males here use song type 1, which in many individuals may alternate with song type 3.

Leucocephalos From the Chita district, which is outside the zone of sympatry, we have a representative sample of song records (36 song variants obtained from 19 males). The peculiarity of the dialect at this locality is the absence of the *teee* element. In the repertoires of most males (16 individuals), variants exist in which the final note of the homotypical series was noticeably elongated, making these songs partly similar to those of types 1 (*teee*) and 3 (*teee-sii*) of *citrinella*. Altogether, there were 20 such variants (56% of the entire sample; figure 6e). In six variants in which the final note of the homotypical series was elongated, there was a noticeable frequency drop towards the end. In eight variants, this final note was absent; 13 variants (36%) were represented by incomplete songs without the last *sii* element.

Only in the repertoires of two out of 19 males, there were, apart from the song types described above, *teee* and *zi-teee* song types (figure 6d) similar in structure to song types 1 and 2 of *citrinella*. In the zone of sympatry, only these two song types are present in the repertoire of phenotypic *leucocephalos*. Thus, in spite of the obvious distinction between *leucocephalos* and *citrinella* song structures in regions outside the contact zone (this distinction being the absence of the *teee*-note in the song of *leucocephalos*), at places where the two species coexist, *leucocephalos* has songs that only quantitatively differ from those of the males of the *citrinella* phenotype. All phenotypic hybrids emit songs of the same type (*teee* and *zi-teee*).

Interspecific differences in song structures in the zone of sympatry

Factor analysis, based on 16 characters with respect to the diversity of the buntings' songs, resulted in the construction of two new factors, which explained 18% and 12% of the variation respectively. The first factor is based on three song characters: *1* the number of notes within the initial homotypical series, *2* the rate of their repetition, and *3* the length of the pause between that series and the *teee* note. The second factor reflects the differences in the frequency modulation of songs.

In the secondary contact zone, the songs of *citrinella* and *leucocephalos* significantly differ

with respect to both factors, while within each species local populations seem to be uniform with respect to these factors. In the zone of sympatry, the songs of *leucocephalos* differ from those of *citrinella* in that they have a smaller number of notes within the homotypical series, a lower rate of their repetition and an elongated pause between the series and the next uniform *teee* element (figure 6: cf positions b and d). Also, many (but not all) songs of *citrinella* are characterized towards the end by an increase of the frequency of the notes of the homotypical series (figure 6a). In *leucocephalos* songs, such an increase is not found.

Although the above differences in the songs of *citrinella* and *leucocephalos* in the zone of sympatry are statistically significant (figure 7), they cannot be considered diagnostic (figure 8); they can hardly play a role as an effective isolating factor.

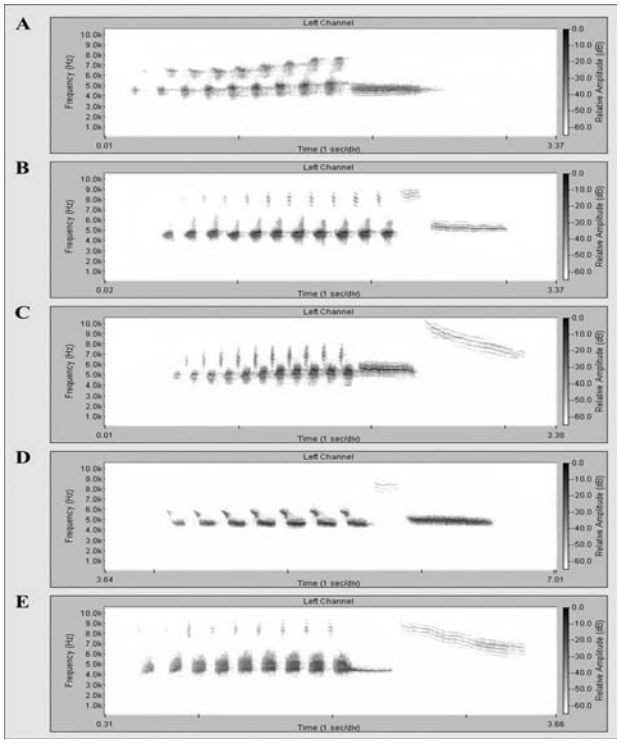


FIGURE 6 Examples of sonagrams of songs of Yellowhammer / Geelgors *Emberiza citrinella* (**A-C**) and Pine Bunting / Witkopgors *E leucocephalos* (**D-E**) (see text)

Discussion

An analysis of the phenotypic composition of mixed populations in the zone of sympatry indicates that the most intense interbreeding takes place in the south-east of western Siberia and the adjoining regions of the north-western Altai region. These two regions however differ in the percentage of yellow and white hybrids. In the Altai region, there is an apparent bias towards the white phenotype (figure 4b). Since these white hybrids may represent a first-generation hybrid (Löhrl 1967), it can be supposed that, in the Altai region, hybridization until now involves genetically pure individuals of *citrinella* and *leucocephalos*, probably having a parapatric distribution in this area. Apparently, where the breeding ranges of *citrinella* and *leucocephalos* meet in the north-western foothills of the Altai mountains, species fusion is in progress.

Partly similar is the situation in the south-east of western Siberia where local species fusion is found as well, in particular in the vicinity of the Novosibirsk Scientific Centre (Panov 2001). Supposedly, hybridization in this region started much earlier. Now, this process is so advanced that it seems impossible to find genetically pure *citrinella* or *leucocephalos* in several mixed populations in the Novosibirsk, Tomsk and Kemerovo districts. There, pure individuals of these species may only be immigrants from areas where the species do not interbreed. For instance, a population of seemingly almost genetically pure *leucocephalos* inhabits forested isles in the Chany lakes (Omsk district).

The process of the progressive mixing of the gene pools can be illustrated by the changes in the phenotypic composition of the population in the vicinity of the Novosibirsk Scientific Centre. From the late 1960s to the late 1990s, a sharp decline in the number of *leucocephalos* was observed (table 3). To explain these changes, two hypotheses can be formulated: *1* the decrease of the number of *leucocephalos* is due to intraspecific processes such as a contraction of the breeding range, or *2* the decrease is due to introgressive hybridization which results in the disappearance of the *leucocephalos* phenotype. Of course, both processes may occur together. Indirect evidence for the second assumption comes from a comparison of two samples (table 4). V A Khakhlov collected the first sample in the

TABLE 3 Dynamics of relative numbers of Yellowhammer / Geelgors *Emberiza citrinella* and Pine Bunting / Witkopgors *E leucocephalos* in the vicinity of Novosibirsk Scientific Centre (after Y S Ravkin unpublished data)

Year	Period of counting	Numbers of individuals/km^2 in different habitats (forests birch-aspen and pine-birch, pine forests in river valley's terraces, gardens in human settlements)	
		citrinella	*leucocephalos*
1963	1-15 June	8-28	8-47
1965	1-15 June	8-12	4-5
1966	1-15 June	7-32	4-6
1969	16 May-5 July	0-23	0
1978	16 May-5 July	19-21	1-4
1979	16 May-15 July	2-10	0
1981	1 June-15 July	0-44 (mean 26.0)	0-10 (mean 2.0)
1989	1-15 June	1-31	0
1993	1-15 June	0-9	0
1994	1-15 June	7-10	0
1995	16-31 May	47	0
	1-15 June	8	11
	9-10 June	0-22	0
	16-30 June	0-68	0

TABLE 4 Proportions of phenotypic classes of males in continuum from Yellowhammer / Geelgors *Emberiza citrinella* to hybrids in samples collected by V A Khakhlov (1) and E N Panov et al (2) (percentages between parentheses). Chi-square test: P=0.008

Sample and years of collecting	Phenotypic classes (cf table 2)				
	0 pure *citrinella*	1 *'citrinella'*	2 yellow hybrids	3 white hybrids	Total number of specimens
(1) 1922-29	20 (18.5%)	43 (39.8%)	35 (32.4%)	10 (9.3%)	108
(2) 1987	0	5 (29.4%)	9 (52.9%)	3 (17.7%)	17
Total number of specimens	20	48	44	13	115

south-east of the western Siberia in 1922-29 while the second sample is based on our observations carried out in the same area in 1997. In the first sample, the proportion of phenotypically pure *citrinella* is significantly higher. It must be stressed, however, that even near the centre of the zone of sympatry there remain locally almost monospecific populations such as the *leucocephalos* inhabiting the forested isles in the Chany lakes.

In the suggested scenario, from the original places of secondary contact in the south-east of the western Siberia, the alien genes migrated west- and eastwards (both through generations and as a result of the dispersion of hybrids in both directions). With time, this process caused the modification of the *citrinella* phenotype all over the breeding range up to the westernmost parts (the acquisition by males of chestnut in the head plumage). From the initial places of interbreeding, hybrid populations began to extend their range eastwards, into the native breeding range of *leucocephalos*. It is indicative that the variable *citrinella* phenotype in the Baikal region does not differ in a statistically significant way from that in the Novosibirsk district where local species fusion takes place. In the former area, however, *citrinella* is reproductively isolated from local *leucocephalos*. Apparently, during the early stages of secondary contact (as in the Baikal region), ethological isolation barriers, namely the clear differences in plumage colouration, are operating effectively. However, with time, when a few hybrids have appeared, these barriers begin to break down, eventually resulting in the rapid progress of introgressive hybridization.

According to our prognosis, species fusion of *citrinella* and *leucocephalos* will inevitably happen at the easternmost border of the present-day

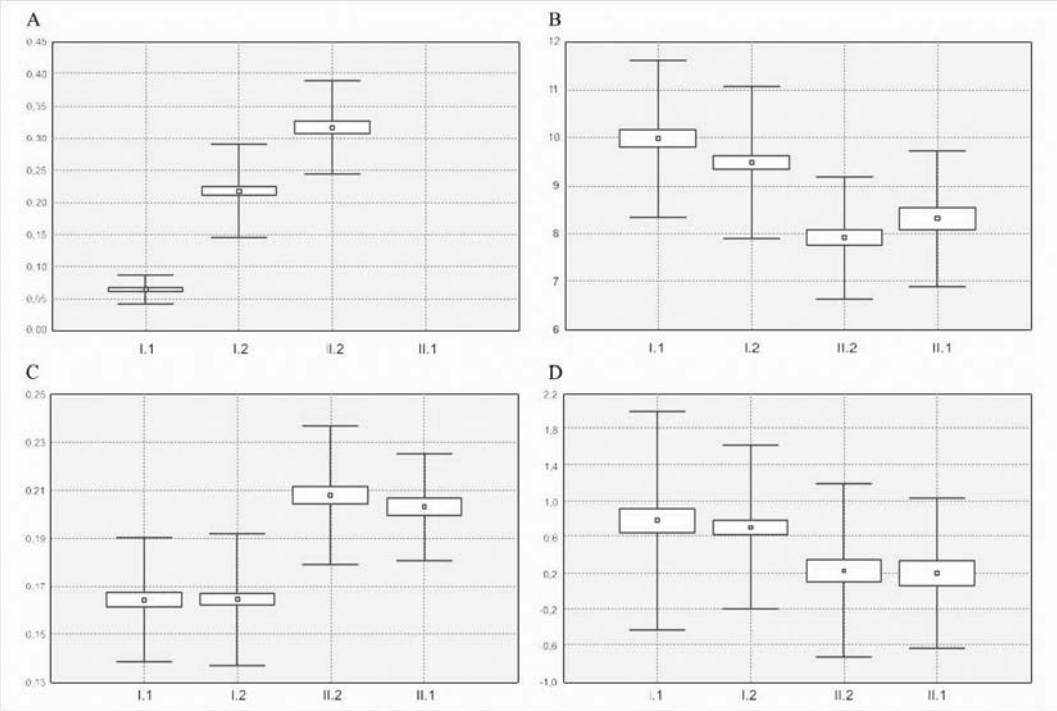


FIGURE 7 Quantitative differences in song structure of Yellowhammer / Geelgors *Emberiza citrinella* and Pine Bunting / Witkopgors *E leucocephalos* in four characters. In graphics: mean, ±SE, ±SD. **A** length of pause between initial homotypical series and *teee* note (s); **B** number of notes within initial homotypical series; **C** mean distance between notes within initial homotypical series (s); **D** correlation coefficient between audio-frequency of note and its number within initial homotypical series. **I** *citrinella*: 1 allopatric part of breeding range (figure 1: point 1-3; n=80); 2 secondary contact zone (figure 1: point 5-8; n=123). **II** *leucocephalos*: 1 allopatric part of breeding range (figure 1: point 9; n=36); 2 secondary contact zone (figure 1: points 4, 5 and 8; n=61)

zone of sympatry. In other words, our hypothesis is supported that, once hybridization had started, its intensification is simply a function of time (Panov 1993). Because *citrinella* and *leucocephalos* generally occur in the same biotopes all over the zone of sympatry and because of the synchrony of their breeding (for details, see Panov 1973), hybridization can be restrained in principle only by ethological isolation barriers. If there is selection against hybrids (which seems unlikely), character displacement in species-specific songs could be predicted. However, evidence for this prediction is not found. On the contrary, the differences in the species-specific song structure become less pronounced in the zone of sympatry.

In conclusion, it can be said that the distinguishing characters of *E c erythrogenys* inhabiting the eastern parts of the breeding range of *citrinella* are most likely due to the influence of *leucocephalos* genes. In other words, this subspecies may be of hybrid origin. Evidence supporting this includes the high variability of characters II and III as well as the absence of a strong correlation between the two characters (r=0.56). Byers et al (1995) reached the same conclusion, albeit in more cautionary words, when stating: 'It is, in fact, possible that some of the traits of the race *erythrogenys* of Yellowhammer are a result of genetic overflow from Pine Bunting.'

Acknowledgements
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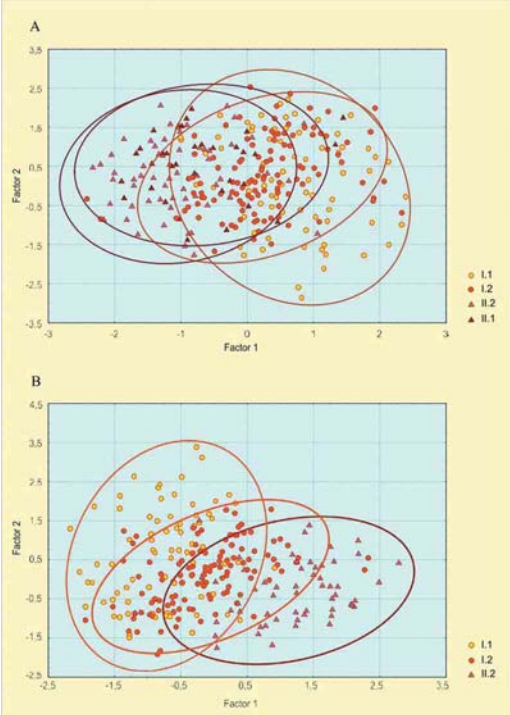

FIGURE 8 Factor analysis of songs of Yellowhammer / Geelgors *Emberiza citrinella* and Pine Bunting / Witkopgors *E leucocephalos*. Structure of factors, see text. **A** statistically significant characters, except length of pause between initial homotypical series and *teee* note (including all populations). **B** all statistically significant characters (except population of *leucocephalos* from Chita region): **I** *citrinella*: 1 allopatric part of breeding range (figure 1: points 1-3; n=80); 2 secondary contact zone (figure 1: points 5-8; n=123). **II** *leucocephalos*: 1 allopatric part of breeding range (figure 1: point 9; n=36); 2 secondary contact zone (figure 1: points 4, 5 and 8; n=61)

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Samenvatting

HYBRIDISATIE TUSSEN GEELGORS EN WITKOPGORS IN RUSLAND Hybridisatie tussen Witkopgors *Emberiza leucocephalos* en Geelgors *E citrinella* is een van de weinige bestudeerde voorbeelden waarbij relatief grootschalige hybridisatie niet heeft geleid tot een samensmelten van twee soorten. Hoewel hybriden tussen beide voorkomen, blijven ook de moedersoorten Witkopgors en Geelgors als zodanig herkenbaar. Het spectrum van pure Geelgors via hybriden tot pure Witkopgors kan worden samengevat in een hybride index (HI). Deze HI wordt afgeleid door voor ieder individu op drie kenmerken in het verenkleed te scoren, namelijk de algemene achtergrondkleur van de lichaamsveren (score tussen 0 en 15), de mate van aanwezigheid van een kastanjebruine 'snorstreek' (score tussen 0 en 7), en de mate van aanwezigheid van kastanjebruin op de teugel en rondom het oog (score tussen 0 en 7). Optelling van de aparte scores leidt tot een waarde voor de HI per individu. De laagste score (0) voor de HI geeft dan een pure Geelgors aan, de hoogste score (30) een pure Witkopgors. Individuen met een score van 1-3 en 26-29 lijken erg op respectievelijk Geelgors en Witkopgors (in het laatste geval bijvoorbeeld Witkopgorzen die geel aan de handpennen vertonen). Vogels met een intermediair gekleurd verenkleed worden gele hybriden genoemd als zij een HI score hebben van 4-14 (en dus meer invloeden hebben van Geelgors) terwijl witte hybriden een score van 15-25 hebben (en meer invloed hebben van Witkopgors).

In de loop van de tijd hebben zowel Witkopgors als Geelgors hun verspreidingsgebied uitgebreid: Geelgors naar het oosten en Witkopgors naar het noorden en westen. Dit heeft tot gevolg gehad dat hun broedgebieden nu overlappen. Aangezien beide soorten in dezelfde biotopen voorkomen, kan hybridisatie meer dan ooit plaatsvinden.

Door het verenkleed van mannetjes te onderzoeken en de HI van ieder individu te scoren, werd vastgesteld dat in Siberië een afname oostwaarts zichtbaar is van de invloed van Geelgors. Dit is duidelijk in zowel een afnemend percentage van gele hybriden in de populatie, als in een afnemende gemiddelde HI.

Hoewel hybridisatie plaatsvindt tot in de Baikalregio en hybriden vruchtbaar blijken, kunnen Geelgors en Witkopgors nog steeds als twee soorten worden beschouwd. De duidelijke verschillen in verenkleed lijken in eerste instantie voldoende om als soortbarrière te dienen. Echter, in de loop van de vorige eeuw is het aantal hybriden op een aantal locaties van West- naar Oost-Siberië wel toegenomen ten opzichte van pure vogels.

Het belang van verschillen in zang in de mate van hybridisatie tussen de twee soorten is ook onderzocht. Van de Geelgors worden drie zangtypen onderscheiden, afhankelijk van hoe het zangtype eindigt. Het aandeel van gezongen zangtypen per locatie kan sterk verschillen: op sommige locaties komt een van de drie zangtypes zelfs niet voor. Buiten het gebied van overlap lijken Witkopgorzen duidelijk anders te zingen dan Geelgorzen. Echter, binnen het gebied van overlap lijkt

de zang van Witkopgors erg op die van Geelgors. Verschillen in zang tussen de twee soorten lijken dus niet zo groot dat zang dient als een isolerende factor. Zo blijkt het soms goed mogelijk om de ene soort te lokken met de zang van de andere soort.

Het lijkt er dan ook op dat op lange termijn zowel verschillen in zang als verenkleed onvoldoende zijn om een totale samensmelting van Witkopgors en Geelgors tegen te gaan. Omdat er ook geen grote verschillen lijken te zijn in gedrag en biotoopkeuze, staat niets een volledige samensmelting op lange termijn van beide soorten in de weg. Illustratief is dat de oostelijke ondersoort van Geelgors *E c erythrogenys* wellicht beter is op te vatten als een product van deze samensmelting dan als een aparte ondersoort.

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Pine Bunting in Italy: status and distribution

Daniele Occhiato

Pine Bunting *Emberiza leucocephalos* is a rare but almost annual Siberian vagrant to Europe, with most records occurring in autumn and winter. There are records in almost all European countries, with the majority of them in Belgium, Britain, France, Italy, the Netherlands and Slovenia (Lewington et al 1991, Mitchell & Young 1997). True cases of overwintering have occurred in Italy and France, although in the latter country much more irregularly and with much lower numbers compared with Italy (Kayser 1999, Yves Kayser in litt). In the rest of the Western Palearctic, the species is a vagrant to Cyprus, Iraq, Jordan, Lebanon, Malta, Syria and Turkey while, surprisingly, it is regular on migration and in winter in Israel (Minshull 1996, Shirihai 1996, Beale 2000). Together with Israel, Italy is the country with the most records in the Western Palearctic. There are now c 150 records for Italy involving at least 316 individuals of which nearly all are considered in this paper. This number is certainly an underestimate because precise data are lacking for many regions.

General review of status in Italy

In the past, the presence of Pine Buntings in Italy was known to a number of authors. Giglioli (1886, 1907) called it an uncommon and irregular species during autumn migration (October-November) and winter (December-February), mostly in the northern Italian regions of Veneto, Friuli-Venezia Giulia and Liguria, as well as in Toscana. For the same regions as listed by Giglioli (1886, 1907), Arrigoni degli Oddi (1904, 1929) considered it more common in spring than in autumn and winter. Moltoni (1951) listed the species as irregular and uncommon, both in autumn and winter, in the regions listed above and also in Lombardia.

In more recent times, the species has been recorded less frequently, in part due to a reduction of hunting activities and especially in the use of mist-nets. Most recent records were still in northern Italy (Perco & Vascotto 1975, Foschi 1986). Until the early 1970s, individuals were present almost annually in the bird markets of several cities in the north-east (Udine, Thiene; Giancarlo Fracasso in litt). Moltoni & Brichetti (1978) and Brichetti & Massa (1998) have therefore listed Pine Bunting as a regular migrant and irregular winter visitor in Italy.

The status of the species seemed to be well known when, in December 1995, I discovered an unexpected and unprecedented wintering population of 45-50 individuals in an area of coastal dunes in Toscana, known as Duna di Migliarino, near the mouth of the Serchio river. In January 1996, I found Pine Buntings at another location, the coastal dunes of Principina a Mare, in the Monti dell'Uccellina regional park (Grosseto, Toscana). Finally, in the winter of 2000/01, I found individuals wintering at Macchia Lucchese, only 2 km north of Duna di Migliarino.

At the same time, there has been a flurry of recent records, many in winter, in other regions of northern Italy (Giovanni Boano, Paolo Grion and Fabio Defend in litt). In light of the many historical records, recent observations, and recent and repeated wintering cases, it can be regarded as a rare but regular migrant and wintering bird in Italy. Remarkably, there is no other European country with such a significant wintering population.

Discussion per region

There are records of Pine Buntings in at least 12 of the 20 Italian regions (figure 1). The status and, where known, the distribution in each region are detailed below. Regions are discussed more or less from north to south.

Friuli-Venezia Giulia

Along with Veneto and Toscana, this is one of the species' strongholds in Italy, both in autumn and winter. It is a rare but regular migrant and irregular wintering species in the region, and the current situation is similar to that described by previous authors (Arrigoni degli Oddi 1929, Moltoni 1951: 36 captures between 1889 and 1950). Perco & Vascotto (1975) and Marino Vascotto (in litt) reported 12 captures between 1974 and 1975, while Sandrin (in Parodi 1999) reports one capture in 1981.

[*Dutch Birding 25: 32-39, 2003*]

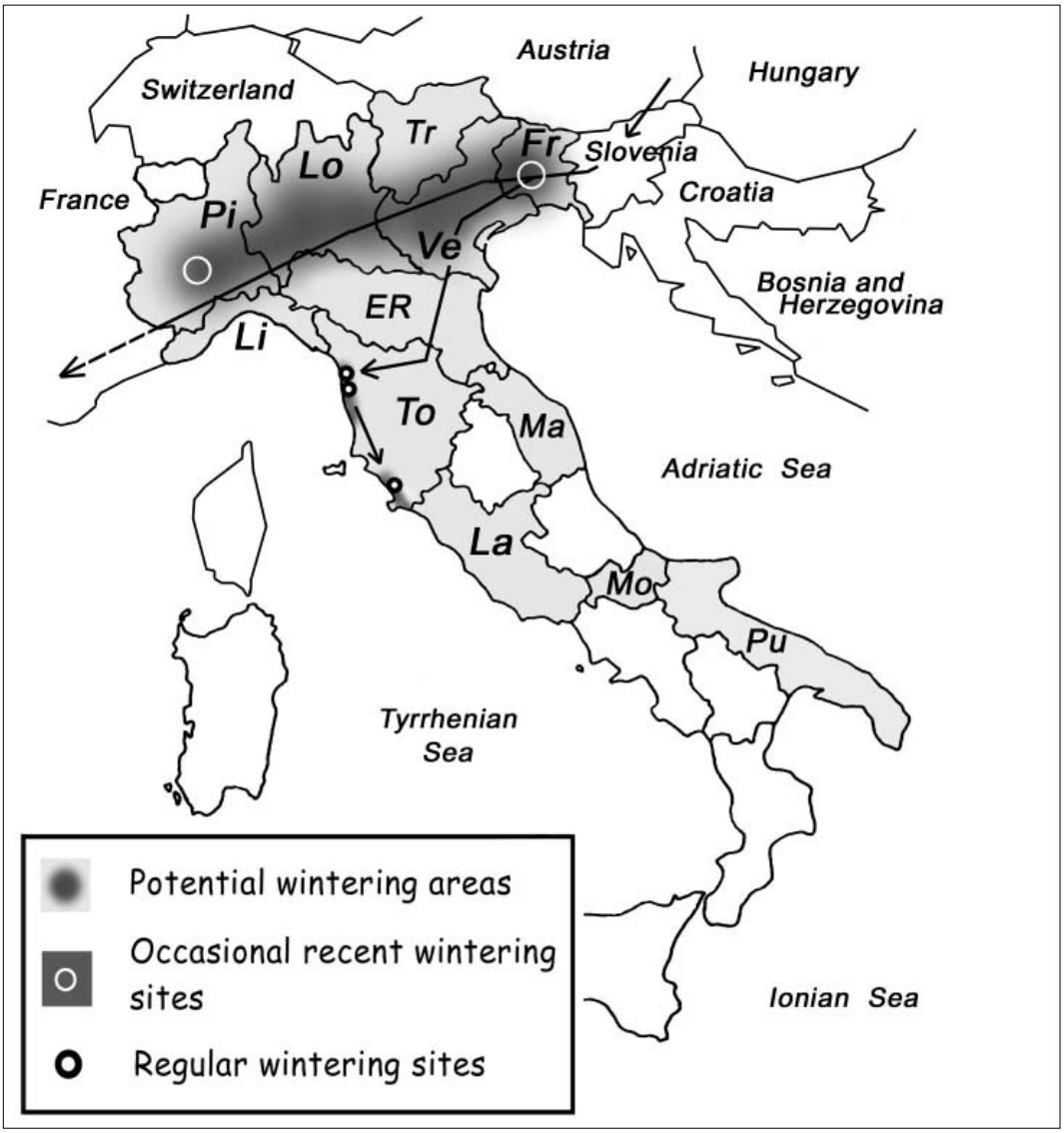

FIGURE 1 Distribution and autumn migration route of Pine Bunting / Witkopgors *Emberiza leucocephalos* in Italy. Regions for which there is at least one record are shaded in light grey (ER = Emilia-Romagna; Fr = Friuli-Venezia Giulia; La = Lazio; Li = Liguria; Lo = Lombardia; Ma = Marche; Mo = Molise; Pi = Piemonte; Pu = Puglia; To = Toscana; Tr = Trentino-Alto Adige; Ve = Veneto). Areas shaded in dark grey indicate potential wintering grounds; white circles indicate areas where Pine Buntings have recently wintered while black circles indicate regular wintering sites. Arrows indicate probable autumn migration routes.

More recently, Pine Buntings have wintered in 2000/01 with eight to 10 individuals, and in 2001/02 with at least 15 individuals, at various localities in Pordenone province (Paolo Grion and Fabio Defend in litt).

Veneto

The species is considered a rare and irregular migrant in the Veneto region (Fracasso et al 2000, Sighele 2000).

In the past, Giglioli (1886, 1889, 1907),

19 Macchia Lucchese dunes, Toscana, Italy, December 2001 *(Daniele Occhiato)*. Part of the dunes furthest from the sea, used by Pine Buntings *Emberiza leucocephalos* as a temporary refuge during the day, or for nocturnal roosting.

Arrigoni degli Oddi (1904, 1929) and Moltoni (1951: 20 individuals reported between 1941 and 1951) considered the species to be an irregular, but not rare, migrant, and identified Veneto as one of the regions where the species occurred most frequently. Foschi et al (1996) list six captures between 1888 and 1907, while Giancarlo Fracasso (in litt) reported 18 captures between 1962 and 1970 in Vicenza province.

Trentino-Alto Adige
Historical data for this region are almost completely lacking, and the current situation is also unclear. Niederfriniger et al (1998) list the species for Bolzano province but make no mention of its status or the number of records.

Lombardia
In Lombardia, the species is considered an irregular migrant (probably regular) (Brichetti & Cambi 1987), although there is a lack of recent records. In the past, Moltoni (1951) listed 15 captures between 1898 and 1950 and considered the species to be 'an irregular, uncommon migrant'.

Piemonte
The species is considered to be accidental in the Piemonte region (Boano & Mingozzi 1981, 1985) with two old records (in 1871 and 1975) and five more recent ones (in 1990, 1993, 1997, 2000 and 2002; Della Toffola & Maffei 1991, Alessandria et al 1994, Ferrero et al 1999; Giovanni Boano in litt, Bruno Caula in litt, Andrea Corso in litt), although it may be better to consider it as a rare and irregular migrant.

In January 2000 and March 2002, Pine Buntings were found in Yellowhammer *E citrinella* flocks, in open countryside with ploughed fields.

Liguria
In Liguria, the species is considered to be an irregular migrant, but it is probably not as rare as the scattered records would suggest (Truffi & Burlando 1998). In the past, Giglioli (1889), Moltoni (1951: 13 sightings from 1871 to 1950) and Arrigoni degli Oddi (1929) listed the species as an irregular, but not rare, migrant. I do not know of any recent records but as the species is regular on the nearby Toscana coast and in the

FIGURE 2 Distribution of Pine Bunting / Witkopgors *Emberiza leucocephalos* in Toscana, Italy. Dark areas show coastal tracts where Pine Bunting probably winters while small white circles show known regular wintering sites. Areas with pale-dark bands show potentially suitable wintering areas.

Camargue, Bouches-du-Rhône, France, it is likely to occur sporadically during migration and in winter.

Emilia-Romagnia
Pine Bunting is considered to be a rare and irregular migrant in the Emilia-Romagnia region (Foschi 1986, Bagni et al 2001). Foschi (1986) lists 13 autumn captures in the Appenines of Romagna (Faenza and Forlì) between 1958 and 1979. Teodorani (1977) lists 10 captures between 1969 and 1976 and states that the species 'continues to occur in Romagna'. I do not know of any recent records, although the birds that winter in Toscana presumably migrate through Emilia-Romagna.

Toscana
Pine Bunting is a rare but regular migrant and wintering species in the Toscana region. Prior to 1993, there were only eight records, seven from the interior in autumn and only one from the coastal area in winter (Favilli 1994). From 1995 onwards, the species has wintered regularly at three coastal sites (Duna di Migliarino, Macchia Lucchese, Principina a Mare; figure 2); however, the numbers varied and it was not always present at all three sites at the same time. No wintering individuals were recorded in 1998/99, perhaps due to limited census efforts, while in 2000/01 the species wintered at all three sites (figure 3). Favilli (in Tellini-Florenzano et al 1997) listed it as an irregular migrant, and occasional in winter, but the records after the winter of 1995/96 had not been included.

Marche
Presumably accidental. Pandolfi & Frugis (1987) do not report any records for Marche; however, Foschi (1986) reported an old capture without further data.

Lazio
Accidental. The status of Pine Bunting in this region is not well known and is currently under revision: Di Carlo (1991) considers it as a 'regular migrant' but does not list any records, while Brunelli & Fraticelli (1997) considered it as an irregular migrant. There is actually only one certain record for Lazio (Fraticelli 1997), and the species is best considered accidental (Fulvio Fraticelli in litt).

Molise
Accidental. Battista et al (1998) do not list the species for Molise but there is actually one record of two birds, one of which was captured, in February 1972 (Santone 1974).

Puglia
Accidental. The only two records for southern Italy are from Puglia, dating from 1874 (Bari) and 1896 (Taranto).

Migration, plumage, habitat and behaviour
Pine Buntings are present in Italy from the second half of October (very rarely September) until the first half of March, with scattered records in April. Alleged records from other months (July; Moltoni 1951) may be related to confusion over dates. Arrival dates in Italy are much earlier than those of wintering populations in Israel and Pakistan (mid-November; Roberts 1992, Shirihai 1996), which are closer to the species' breeding range. One can reasonably suspect that the various wintering populations have different geographic origins.

Pine Buntings probably reach Italy through north-eastern Europe (as indicated by the 13 records in Slovenia; Mitchell & Young 1997), arriving in the north-eastern regions first. Therefore, it is not surprising that Friuli-Venezia Giulia is the region with most October records. From here, part of the population presumably con-

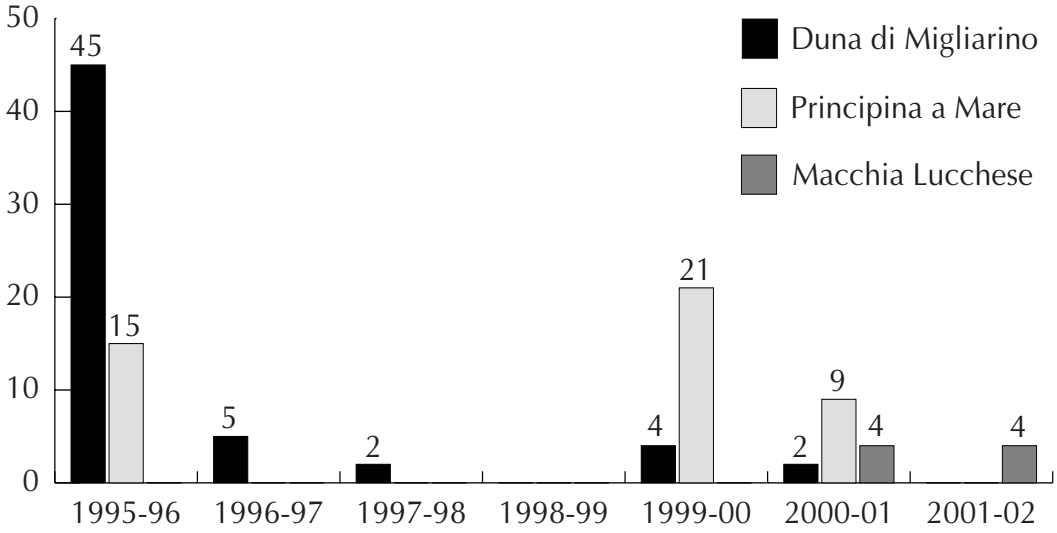

FIGURE 3 Number of wintering Pine Buntings / Witkopgorzen *Emberiza leucocephalos* per site along the Toscana coast, Italy.

tinues towards Piemonte and the coast of Liguria, eventually reaching the Camargue, France, while another part crosses the Appennines into Toscana and Emilia-Romagna (cf Foschi 1986; also suggested by older captures from Toscana, cf Giglioli 1889, 1907, Favilli 1994), reaching the wintering range in coastal Toscana in early November (figure 1). No hypothesis can be formulated for spring migration because there are too few records from this period.

The region with most data is Toscana where I have undertaken regular studies and censuses of the wintering population since 1995.

The first winterers usually reach Toscana during the first week of November, more rarely in late October; generally they form small flocks but on one occasion I saw as many as 10 together. Numbers reach a maximum in mid-December and then remain constant until at least mid-February. The last individuals invariably leave the wintering grounds during the first week in March.

More than 70% of the over 110 individuals that wintered in Toscana since 1995/96 were in first-winter plumage, while the male/female ratio was c 1:2. In December 1995, Nicola Baccetti of the Istituto Nazionale per la Fauna Selvatica (INFS) captured and ringed 12 individuals, six males and six females, at least nine of which were still in first-winter plumage. All 12 had worn tertials, some more so than others, and new secondaries, while only eight showed signs of wear on the primaries. All first-winter birds had moulted the greater and median coverts, had retained the juvenile alula, and had pointed rectrices. Table 1 lists the biometric data for the captured individuals. Values for these birds do not vary much from what has been reported in the literature (Cramp & Perrins 1994, Byers et al 1995).

Of the over 110 individuals studied in the field in Toscana from 1995/96, only one male showed plumage characters consistent with a hybrid with Yellowhammer (at Macchia Lucchese, winter of

TABLE 1 Biometric data for Pine Buntings / Witkopgorzen *Emberiza leucocephalos* ringed at Duna di Migliarnio, Toscana, Italy, in December 1995 (data from Nicola Baccetti). Figures present mean and range (in parentheses); all measurements in mm, except weight (in g).

	Wing	Bill (to skull)	Tarsus	Weight
Male (n=6)	96.5 (94 – 99)	15.2 (14.4 – 15.7)	19.4 (18.3 – 20.5)	28.2 (20.5 – 30.6)
Female (n=6)	90.0 (87 – 92)	15.1 (15.0 – 15.3)	19.8 (19.4 – 20.0)	30.0 (28.7 – 32.2)

2000/01, pers obs). This individual had a broad white supercilium and a predominantly white throat, with chestnut-red tones present only in the malar area and in front and behind the eye. There were, however, no yellow plumage tones whatsoever, not even on the outer webs of the primaries or on the underwing-coverts. This hybrid was very similar to that depicted on plate 3 in Byers et al (1995; labelled as a variant adult male) and to that reported by Aye & Schweizer (2003) from Iran in February 2001, but it was a little different from the white-headed birds depicted in Bradshaw & Gray (1993; figure 2, bird B-D), having brick-red lores (not white) and and being more brick-red below the blackish stripe on the lower ear-coverts. These so-called 'white hybrids' are widely reported from the Siberian breeding area of Pine Bunting, with an increasing frequency from south-west to south-east in the zone of overlap with Yellowhammer, notably in the Altai mountains area where pure Pine Buntings seem to be increasingly rare (Panov et al 2003). Since hybrids are still rare in north-western Siberia (Panov et al 2003), it seems reasonable that the wintering Toscana population of Pine Bunting, with only phenotypically pure birds except for one presumed hybrid, originates from there.

Pine Buntings in Toscana winter in well-preserved, flat or gently undulating Mediterranean coastal dunes, of extensive length but relatively narrow, dominated by *Ammophila littoralis* and with a significant presence of other plants typical of sandy soils (like *Agropyron*, *Eryngium*, *Euphorbia*, *Medicago* and *Pancratium* species). Mediterranean maquis (mainly *Juniperus* and *Arbutus*) occurs behind the dunes, and further inland extensive groves of *Pinus pinaster* and *P pinea* are present. This habitat is altogether somewhat reminiscent of the wooded steppes that are locally used by the species on its Siberian breeding grounds (Cramp & Perrins 1994). Interestingly, this type of habitat is very different from that used in Israel and in the Camargue, which host the closest wintering populations. In Israel, Pine Buntings winter in badlands and mountain slopes, garrigue, wooded steppes and even open hilly areas with cut-over fields and good grass/shrub cover, often near orchards and small pine groves (Shirihai 1996). In the Camargue, the species winters in old sand dunes that have been recolonized by vegetation, with good shrub and tree cover (mostly *Populus alba*), which occur as islands in cultivated fields, especially rice fields (Yves Kayser in litt). There have been no other cases of wintering in coastal dunes reported in the literature, and Pine Buntings are usually said to winter in the interior, and never at sea level (Roberts 1992, Cramp & Perrins 1994, Byers et al 1995, Shirihai 1996). In the Camargue, where wintering territories are near the coast, the species does not frequent coastal dunes (Yves Kaiser in litt).

In Toscana, Pine Buntings commonly flock with other seed-eating passerines, as elsewhere in its range (eg, Roberts 1992, Cramp & Perrins 1994, Byers et al 1995, Shirihai 1996). It most often occurs with Italian Sparrow *Passer 'italiae'*, Common Chaffinch *Fringilla coelebs*, European Greenfinch *Chloris chloris*, European Goldfinch *Carduelis carduelis*, Yellowhammer, Cirl Bunting *E cirlus*, Common Reed Bunting *E schoeniclus* and Corn Bunting *E calandra*. It joins mixed-species flocks of 10 to 100 individuals. Nevertheless, Pine Buntings seem to maintain a certain cohesiveness within these mixed-species flocks, facilitated by the constant emission of various types of contact calls. This type of behaviour is most easily observed when flocks fly away: at these moments, Pine Buntings tend to fly away together and away from the rest of the flock. It is most commonly found with Cirl Buntings, due in part to the latter species' abundance in coastal dunes in Toscana. The two species are easily separable in flight, due to their different size, structure and flight style, but also because Pine Buntings tend to vocalize constantly and usually alight nearby, often in the open on top of shrubs or small trees, while Cirl Buntings tend to fly away quietly and alight 100s of meters away, usually in the middle of shrubs or tree crowns (pers obs).

On their wintering grounds in Toscana, Pine Buntings usually feed on the seeds or shoots of *Ammophila* which they gather on the ground or which they rip directly off the plant (pers obs). Usually, they tend to feed on the portion of the dune closest to the sea, and often on the beach itself (much like Snow Bunting *Plectrophenax nivalis*), either in single-species flocks, or alongside with other species (most often Common Chaffinch, European Greenfinch and Cirl Bunting); they rarely feed near dense maquis (pers obs). The pine groves behind the dunes are used only as a temporary refuge in case of danger, during the middle of the day for diurnal roosting or preening, or as nocturnal roost sites (sometimes with other species).

In Friuli-Venezia Giulia, the species has been recently observed in the interior, in the so-called

'magredi', areas of gravel interspersed with grassy patches and scattered trees and shrubs, while in Piemonte it has been recently observed in open countryside with ploughed fields.

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Samenvatting
WITKOPGORS IN ITALIË: STATUS EN VERSPREIDING In december 1995 en januari 1996 werd een winterpopulatie van Witkopgorzen *Emberiza leucocephalos* ontdekt op drie plaatsen aan de kust van Toscane, Italië. Sindsdien werd de soort jaarlijks langs de Toscaanse kust en ook in andere delen van noordelijk Italië waargenomen. De soort wordt nu beschouwd als een zeldzame maar regelmatige doortrekker en wintergast in Italië en historische gegevens suggereren dat dit vroeger ook zo was. Tot nu toe is de soort in 12 van de 20 Italiaanse regio's vastgesteld en voor elk van die regio's worden status en verspreiding behandeld. De meeste waarnemingen komen van Friuli-Venezia Giulia, Toscane en Veneto en dateren voornamelijk van de tweede helft van oktober tot de eerste helft van maart. Mogelijke trekroutes, habitatkeuze en gedrag worden besproken alsmede verenkleed en biometrie. Van de 110 in Toscane bestudeerde exemplaren was er (slechts) één die enige kenmerken van een hybride met Geelgors *E citrinella* vertoonde.

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Wintering hybrids Pine Bunting x Yellowhammer in northern Iran

Raffael Aye & Manuel Schweizer

On 27 February 2001, five presumed hybrids Pine Bunting x Yellowhammer *Emberiza leucocephalos x citrinella* were recorded at Fereydoon Kenar, Mazandaran province, Islamic Republic of Iran. As only few descriptions and photographs of such hybrids have been published, we present a short description of the birds recorded. At first we could find no information on the occurrence of such hybrids in Iran but a few observations came to our attention while preparing this note. These observations taken together suggest regular wintering of this type of hybrids in Iran.

Observations

During a birding trip to Iran, one week was spent in the lowlands of Mazandaran Province, close to the Caspian shore. In the early afternoon of 27 February 2001, together with Reto Burri, Daniel Matti, Mathias Ritschard and Tobias Roth, we watched a mixed flock of Pine Buntings and Yellowhammers close to the coastline of the Caspian Sea in Fereydoon Kenar (52:30 E, 36:40 N). About half of the c 200 birds were seen well enough to be assigned to one of the two species with a high probability (see discussion). Of these birds, about half were phenotypic Pine Buntings. While we were studying these birds, Manuel Schweizer found a male presumed hybrid of the white-headed type (cf Byers et al 1995) and, subsequently, at least three other male presumed hybrids were found. In order to catch one of these birds, two mistnets and a tape lure playing Pine Bunting song were installed. Until dusk, six male buntings were trapped. Of these, four were phenotypic Yellowhammers, one was a phenotypic Pine Bunting and one was a fifth presumed hybrid. This bird was very similar to a male Pine Bunting, with yellowish instead of purely white primary fringes, faintly yellowish edges to the rectrices, and yellowish underwing-coverts as the only features indicating a hybrid origin. In the field, only a few birds were seen under conditions that allowed us to see the white primary fringes. This trapped bird had not been identified as a hybrid in the field.

Descriptions

As we were mostly unable to detect details of the wing colouration in the field, the identification was largely based on the head pattern, except for the trapped bird.

Two of the five presumed hybrid birds belonged to the white-headed type (Byers et al 1995) (see figure 1). Both had white as ground colour of the head. Only one of these two birds showed a faint yellowish tinge at the rear end of the supercilium and near the upper border of the ear-coverts. Both birds showed a blackish lateral crown-stripe, a blackish eye-stripe, black surroundings of the ear-coverts and a blackish moustachial stripe. The moustachial stripe was thinnest at the gape and widest at the lower end. The submoustachial region was rufous in both birds, and the throat and the malar region were white. The bird with the yellowish tinge showed a white triangular patch reaching from the ear-coverts to the moustachial stripe. The other bird showed a rufous patch above the rear end of the eye and the beginning of the eye-stripe behind the eye. The nape was grey with a rufous tinge, and the underside was white with rufous streaking on the breast-sides and flanks.

Two presumed hybrids were intermediate between the white-headed birds and Pine Bunting, in showing a broad white supercilium behind the eye and much white on the ear-coverts but a primarily rufous throat. No other hybrid features were noticed. The conditions did not allow us to assess the colour of the primary fringes.

The trapped bird was very similar to a male Pine Bunting (cf plate 20). The supercilium was very narrow and pale grey-brown, thus not pointing to a hybrid at all. However, the fringes of p1-5 (primaries numbered descendantly) were yellowish-olive, slightly more brownish than in the Yellowhammers with which the bird could be compared. The fringes of p6-8 were buff basally, yellowish in the middle and whitish distally. P9 had a very narrow (c 0.5 mm) whitish fringe. The fringes of the two outermost pairs of rectrices were faintly but noticeably yellowish. The third feather tract showing a yellowish tinge were the

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FIGURE 1 Hybrids Pine Bunting x Yellowhammer / Witkopgors x Geelgors *Emberiza leucocephalos x citrinella*, Fereydoon Kenar, Mazandaran province, Iran, 27 February 2001 *(Manuel Schweizer)*

lesser underwing-coverts; the median underwing-coverts were pale greyish, the greater underwing-coverts whitish and the axillaries white. Apart from this, no conclusive hybrid feature could be detected. The outermost pair of rectrices did not show a very large amount of white as would be typical for Pine Bunting. On the inner web, the blackish colour reached to c 2 cm from the tip (no exact measurement available). However, there is much variation in this feature and the differences are often useless on a single bird (Byers et al 1995).

Discussion

Byers et al (1995) call the white-headed type a *probable* hybrid between Pine Bunting and Yellowhammer. However, Glutz von Blotzheim & Bauer (1997) talk of it as a hybrid without mentioning any doubts about its exact identity, and so does Eugeny Panov, whose sketch in Bradshaw & Gray (1993) of an adult male hybrid in western Siberia on 19 May looks very similar to the two white-headed hybrids observed by us. We follow Panov et al (2003) in treating the white-headed type as a hybrid.

The two other presumed hybrids had a head pattern intermediate between a typical male Pine Bunting and a male hybrid of the white-headed type. The broad white supercilium behind the eye and the large amount of white on the ear-coverts point to a hybrid origin. Male Pine Bunting shows at most a narrow white band along the blackish lateral crown-stripe, but not a white supercilium.

The trapped bird showed yellow in its plumage, which is a certain sign of hybrid origin (Byers et al 1995). It has to be pointed out that, to our current knowledge, it is not possible to identify Pine Buntings with absolute certainty in the field, because Byers et al (1995) mention Pine Buntings with hybrid influence, which show yellow underwing-coverts as the only hybrid feature. They go even further, assuming that there must also be birds which still carry Yellowhammer genes but do not show any hybrid feature (ie, no yellow at all in the plumage). For these reasons and the reason mentioned above, there could well have been more hybrids in the bunting flock than the five we have noticed.

In the centre of the taiga and forest steppe zone from Lake Baikal west to the Ural, Russia, the breeding ranges of Pine Bunting and Yellowhammer overlap over a distance of c 3000 km. However, hybridization seems to be restricted to the southern part of the area of sympatric occurrence. In the whole sympatric zone, a proportion of 2.5% F1 (first-generation) hybrids was calculated, and 15% of Pine Buntings and 20% of Yellowhammers from this area show some influence of the other taxon (Glutz von Blotzheim & Bauer 1997).

In northern and south-western Iran, Pine Bunting is a regular wintering bird, and northern and western Iran are part of the main wintering range of Yellowhammers from the eastern part of their range (Byers et al 1995). There are no records of Pine Bunting in the north-west of the country; otherwise, the winter distributions of both species are similar with observations mainly from the northern part of the country. The earliest

autumn records are on 28 October for Pine Bunting and on 24 October for Yellowhammer, the latest spring records on 30 March for Pine Bunting and on 28 March for Yellowhammer. Yellowhammer seems to be by far the commoner of the two species (Derek Scott pers comm).

Glutz von Blotzheim & Bauer (1997) state that the winter occurrence of hybrids seems to be concentrated in eastern Central Asia and mention few winter records from outside this area, and none from Iran. However, there are several reports from hybrids Pine Bunting x Yellowhammer which have remained unpublished so far. On regular trips to Lashgarak, Tehran province (51:40 E, 35:47 N) in the years 1970-76, Derek Scott (pers comm) noted that 'a small number of individuals showed characteristics of both Pine Bunting and Yellowhammer and were presumably hybrids'. On 23 February 1974, he observed another male of presumed hybrid origin at Lapoo-Zargmarz Ab-bandans, Mazandaran province (53:17 E, 36:50 N). These are the only previous observations of hybrids Pine Bunting x Yellowhammer in Iran we could find but this list may well be incomplete.

In view of Iran's low ornithological coverage, we are convinced that these observations have to be interpreted in the way that hybrids Pine Bunting x Yellowhammer regularly winter in northern Iran. We can only speculate on the number of wintering hybrids.

According to Glutz von Blotzheim & Bauer (1997), the white-headed hybrid type is thought to be relatively common. However, Byers et al (1995) state that it seems to be most frequent in the Altai Mountains. Therefore, it could be possible that the two individuals of the white-headed type seen at Fereydoon Kenar have migrated from as far as the Altai region.

All hybrids observed at Fereydoon Kenar were males, but female hybrids could well have been present in the flock as well. However, very little is known about the identification of female hybrids (see Bradshaw & Gray 1993, for a few hints).

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20 Hybrid Pine Bunting x Yellowhammer / Witkopgors x Geelgors *Emberiza leucocephalos x citrinella*, Fereydoon Kenar, Mazandaran province, Iran, 27 February 2001 *(Raffael Aye)*

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Samenvatting

OVERWINTERING VAN HYBRIDEN WITKOPGORS X GEELGORS IN NOORD-IRAN Op 27 februari 2001 werden in Fereydoon Kenar, Mazandaran, Iran, in een gemengde groep van c 200 Witkopgorzen *Emberiza leucocephalos* en Geelgorzen *E citrinella*, vier hybriden Witkopgors x Geelgors *E leucocephalos x citrinella* waargenomen. Met behulp van enkele mistnetten en het afspelen van zang van Witkopgors werden zes mannetjes van de gemengde groep gevangen, waaronder een vijfde hybride mannetje, die pas in de hand als zodanig kon worden gedetermineerd.

Twee van de vier in het veld waargenomen hybriden behoorden tot het witkoppige type (figuur 1), twee waren intermediair tussen dit type en Witkopgors. De vijfde, gevangen, vogel (plaat 20) leek sterk op een mannetje Witkopgors. De zomen van p1-5 (handpennen van binnen naar buiten genummerd) waren geelachtig olijf gekleurd; de zomen van p6-8 waren zeemkleurig aan de basis, geelachtig in het midden en witachtig aan het uiteinde; en p9 had een zeer smalle witachtige zoom. De kleine ondervleugeldekveren hadden een geelachtige waas, de middelste waren lichtgrijs, de grote witachtig en de okselveren wit. Verder konden geen duidelijke hybride kenmerken worden vastgesteld.

Zowel Witkopgors als Geelgors overwinteren in Iran, met de meeste waarnemingen in het noorden. Er zijn ook enkele, niet gepubliceerde waarnemingen van hybriden Witkopgors x Geelgors in Iran in de jaren 1970. Omdat er maar weinig avifaunistische gegevens over Iran bekend zijn, kunnen de waarnemingen het beste worden geïnterpreteerd als aanwijzing dat hybriden Witkopgors x Geelgors regelmatig overwinteren in Noord-Iran.

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Mongoolse Pieper te Bloemendaal in november 2002

Erik Maassen & Arnoud van den Berg

Op zondag 24 november 2002 was Erik Maassen met zijn zoon Jelle en gast Patrick Bergkamp aan het vangen op de vinkenbaan Cornelis van Lennep in de Kennemerduinen te Bloemendaal, Noord-Holland. Uit de luidspreker klonk de zang van Veldleeuwerik *Alauda arvensis*. Het was een zonnige en onbewolkte ochtend en er stond een matige zuidoostelijke wind. Afgezien van een passerende Blauwe Kiekendief *Circus cyaneus* en wat Sijzen *Carduelis spinus* en barmsijzen *C cabaret/flammea* was er geen trek waar te nemen. Omstreeks 10:15 kwam een pieper *Anthus* vanuit het noorden aangevlogen. De vogel leek aangetrokken door de Veldleeuwerikzang en twee Veldleeuweriken die als lokvogels aanwezig waren. Hij viel direct op als een grote en opvallend lichte pieper en bleef enkele keren biddend boven de baan hangen. Hij liet daarbij een roep horen die EM niet kende. Vanwege het bidden werd eerst gedacht aan Grote Pieper *A richardi*. De vogel verdween boven de hut uit zicht en er werd inmiddels driftig gezocht naar de minidisc met het geluid van Grote Pieper om de vogel daarmee binnen de slagnetten te lokken. Toen EM weer naar buiten keek zat de vogel reeds op de baan en kon EM zijn slag slaan. Tijdens het uit het net halen viel al op dat het 'niet echt een Grote Pieper' was, een soort waarvan EM meerdere in de hand heeft gehad. De vogel werd geringd (Arnhem V092140) en nauwkeurig gemeten. Op basis van de biometrie leek Grote Pieper af te vallen maar de maten bleken zowel op Mongoolse Pieper *A godlewskii* als Duinpieper *A campestris* te passen (cf Svensson 1992). Bovendien was de vogel in juveniel kleed zonder een voor Mongoolse Pieper diagnostische adulte middelste dekveer (cf Lewington et al 1991, Jonsson 1997, Svensson et al 2002). EM besloot Arnoud van den Berg te bellen die een half uur later aanwezig was en EM's vermoeden kon bevestigen dat de vogel een Mongoolse Pieper was. Vervolgens probeerde EM telefonisch zo veel mogelijk medewerkers van de vinkenbaan te waarschuwen. Uiteindelijk lukte het Chris van Deursen, Joost van der Elst, Rienk Geene en Klaas Postuma op tijd te komen om de pieper te bekijken voordat deze na 13:00 werd losgelaten. De vogel vloog zonder te roepen in noordelijke richting weg. ABvdB wist hem daarna nog eenmaal uit het gras op te jagen maar opnieuw liet de verder noordwaarts vliegende vogel daarbij geen roep horen.

Beschrijving

GROOTTE & BOUW Postuur als Grote Pieper maar iets kleiner met kortere staart en poten.

KOP Kruin met zware lengtestreping. Wenkbrauwstreep licht geelachtig voor oog en opvallend wit boven en vlak achter oog. Vaag begrensde donkere oogstreep achter oog. Lichte ongestreepte teugel. Licht bruingrijze oorstreek met vage donkere omranding. Smalle witte oogring. Smalle donkere baardstreep. Witte mondstreep, kin en keel.

BOVENDELEN Bovendelen bruin met zwarte lengtestreping. Stuit weinig gestreept.

ONDERDELEN Lichtbruine borst zeemkleurig met opvallende zwarte lengtestrepen, dichtst onder zijkeel. Flanken ongestreept en zeemkleurig, witter wordend naar buik toe.

VLEUGEL Slagpennen en tertials grijsbruin met smalle lichte rand. Grote en middelste dekveren zwartbruin met smalle witte zoom, twee witte vleugelstrepen vormend. Kleine dekveren (juveniele) met witte zoom, enkele (postjuveniele) met oranjeachtige zoom.

STAART Binnenste staartpennen (t1) bruingrijs met vage lichte rand. Ernaast gelegen staartpennen (t2-3) zwartbruin. Op twee na buitenste pen (t4) zwartbruin met smalle witte top, breder op rechter- dan op linkerpen. Op één na buitenste pen (t5) met veel wit op uiteinde, binnenrand voor meer dan helft wit en buitenvlag met grote witte driehoek. Buitenste pen (t6) wit.

NAAKTE DELEN Snavel lichtroze met zwartachtige bovenrand en punt. Poot lichtgeel. Nagels zeer licht rozegeel.

BIOMETRIE (Metingen uitgevoerd conform Svensson 1992.) Vleugellengte 95 mm. Staartlengte 71.2 mm. Snavellengte (tot schedel) 16.9 mm; snavelhoogte 4.4 mm; snavelbreedte 4.2 mm. Tarsuslengte 26.1 mm; achternagellengte links 10.0 mm en rechts 14.0 mm. Vetgraad 3 (cf Busse & Kania 1970).

RUI Alula, handdekveren en carpale dekveer juveniel. Armdekveren links en rechts: grote dekveren (van buiten naar binnen genummerd) 1-8 en 10 juveniel, 9 postjuveniel; middelste dekveren alle juveniel; kleine dekveren meeste juveniel, enkele postjuveniel. Tertials links s7 en s9 juveniel, s8 postjuveniel; rechts s7 juveniel, s8 en s9 postjuveniel (s9 onvolgroeid, ruiscore 3; cf Ginn & Melville 1983). Staart links t1 postjuveniel (ruiscore 4; cf Ginn & Melville 1983), t2-3 juveniel,

21 Mongoolse Pieper / Blyth's Pipit *Anthus godlewskii*, eerste-winter, 24 november 2002, Kennemerduinen, Bloemendaal, Noord-Holland *(Arnoud van den Berg/Vrs van Lennep)*

t4-6 postjuveniel (ruiscore 4); rechts t1 postjuveniel (ruiscore 4), t2-6 juveniel.
GEDRAG In biddende vlucht landend. Na loslaten verborgen in graspol en pas bij dichte benadering (enkele meters) opvliegend.

Determinatie
Grote Pieper kon worden uitgesloten omdat snavelbreedte (4.2 mm) en tarsuslengte (26.1 mm) kleiner waren dan door Svensson (1992) genoemde minima (respectievelijk 4.8 mm en 28 mm). De snavelbreedte was ook kleiner dan het door Svensson (1992) vermelde minimum voor Duinpieper (4.4 mm). De verhouding vleugel/tarsus (95/26.1=3.64) sloot (oostelijke ondersoorten van) Grote Pieper en Ladangpieper *A rufulus* uit (cf Cramp 1988, van den Berg et al 1993). De linker achternagel (10 mm) was te kort voor Grote Pieper (minimum 13.5). De rechter achternagel (14 mm) zou net lang genoeg zijn voor Grote Pieper maar was te lang voor Duinpieper (maximum 12). De oorzaak van het opmerkelijke lengteverschil tussen beide achternagels kon niet worden vastgesteld; beide leken onbeschadigd en scherp. Bij een eerstejaars Grote Pieper die op 9 december 2002 te Bloemendaal werd gevangen bleek eveneens een verschil in lengte tussen beide achternagels te bestaan (links 15.2 mm en rechts 17.7 mm); het is daarom raadzaam bij deze soorten de achternagels van beide poten te meten. Op de rechtervleugel bevonden zich twee of meer verse kleine dekveren die met hun brede lichte ongetekende zoom overeenkwamen met de tekening van adulte grote dekveren van Mongoolse Pieper, niet van Grote Pieper (cf Alström & Mild 1997). De vergeleken met Grote Pieper geringe hoeveelheid wit op de op één na buitenste staartpen (t5) was kenmerkend voor Mongoolse Pieper (cf Svensson 1992, van den Berg et al 1993, Alström & Mild 1997). Grote Pieper en Duinpieper hebben vrijwel altijd een andere tekening op de binnenvlag van deze pen. Een opvallend verschil met Duinpieper was de bleke teugel, zonder de voor Duinpieper karakteristieke donkere teugelstreep. Het was een eerstejaars vogel waarvan de meeste vleugelveren juveniel waren.

Voorkomen Mongoolse Pieper
Mongoolse Pieper broedt van Zuid-Transbaikal en Oost-Mantsjoerije (voornamelijk in Mongolië) zuid tot Tibet en overwintert op het Indische subcontinent en langs de Perzische Golf. Deze

22-25 Mongoolse Pieper / Blyth's Pipit *Anthus godlewskii*, eerste-winter, 24 november 2002, Kennemerduinen, Bloemendaal, Noord-Holland *(Arnoud van den Berg/Vrs van Lennep)* **26-27** Grote Pieper / Richard's Pipit *Anthus richardi*, eerste-winter, 9 december 2002, Kennemerduinen, Bloemendaal, Noord-Holland *(Erik Maassen/Vrs van Lennep)*

vangst was het derde of vierde geval voor Nederland. Het eerste (en het derde voor Europa) betrof een eerstejaars exemplaar dat op 13 november 1983 werd gevangen tijdens Veldleeuwerikenvangst te Westenschouwen, Zeeland; het overleed kort na de vangst en de balg bevindt zich in de collectie van het Zoölogische Museum te Amsterdam, Noord-Holland (van den Berg et al 1993). De tweede bevond zich op 25-28 oktober 1996 op de Maasvlakte, Zuid-Holland, en werd door talloze vogelaars bekeken en gefotografeerd (Berlijn et al 1997). Een op 12 november 2002 gedurende 15 min door één waarnemer geobserveerd exemplaar bij De Cocksdorp, Texel, Noord-Holland, zou, indien aanvaard, het derde betreffen (Arend Wassink in litt). De Bloemendaalse vangst maakte deel uit van een influx in het noorden van Europa met twee meldingen in Finland op 1-11 oktober en 4-5 oktober, twee in Noorwegen op 8-27 oktober en 19 november, één in Estland op 11-25 oktober, ten minste drie in Zweden op 15-21 oktober, 2-7 november en 10-19 november, en één in Nottinghamshire, Engeland, vanaf 29 december (van den Berg 2002, 2003). De waarnemingen in oktober-november 2002 doen het totale aantal Europese gevallen met meer dan een kwart toenemen. Na de eerste drie gevallen in Sussex, Engeland, in 1882, in Finland in 1974 en in Nederland in 1983 is de soort steeds frequenter in Europa vastgesteld met in 1986-2001 11 in Finland, negen in Brittannië, twee in België, Denemarken, Frankrijk en Noorwegen en één in Duitsland (Helgoland), Italië, Noorwegen en Zweden (cf van den Berg & Bosman 2001). De c 45 Europese gevallen tot en met 2002 dateren van de laatste vier maanden van het jaar behalve een vogel die van 16 januari tot 25 februari 1998 verbleef in de Crau, Bouches-du-Rhône, Frankrijk.

Voorkomen Grote Pieper en Duinpieper

Uit de statistieken van de drie vinkenbanen in Kennemerland, Noord-Holland, blijkt dat behalve een Mongoolse Pieper ooit ten minste 57 Grote Piepers en vier Duinpiepers zijn gevangen. De drie banen liggen alle weliswaar in de duinen nabij de kust maar de vegetatie en ligging verschillen. Op de vinkenbaan van de Amsterdamse Waterleidingduinen te Zandvoort werden in 1967-2001 zeven Grote Piepers en geen Duinpieper gevangen (Tom van Spanje in litt) en op de vinkenbaan in het Noordhollands Duinreservaat te Castricum in 1960-2002 24 Grote Piepers en drie Duinpiepers (Arnold Wijker in litt). Op de vinkenbaan te Bloemendaal was de verhouding Grote Pieper versus Duinpieper in 1958-2002 zelfs 26 : 1, waarbij een Grote Pieper op 9 december 2002 als laatste is meegeteld. Dit verschil in voorkomen wordt voor 1999-2002 bevestigd door het aantal geluidsopnamen van het Sound Approach project bij het Kennemermeer te IJmuiden, Noord-Holland, met zeven opnamen van de vluchtroep van Grote Piepers tegen één van Duinpieper (Magnus Robb in litt). Het is opmerkelijk dat uit regelmatige trektellingen een geheel andere verhouding tussen Grote Pieper en Duinpieper naar voren komt. Zo werden in 1986-2001 bij Parnassia 600 m zuidwestelijk van de vinkenbaan te Bloemendaal 52 langstrekkende Grote Piepers en liefst 111 Duinpiepers geteld (Eef Kieft in litt). Dit schrille contrast komt ook naar voren uit trektellingen elders langs de Noordzeekust, zoals op de Vulkaan, Westduinpark, Den Haag, Zuid-Holland, waar in 1985-1991 63 Grote Piepers en liefst 244 Duinpiepers werden genoteerd; overigens waren dat er in 2001-02 respectievelijk 18 en 14 (Rinse van der Vliet in litt). Een goede verklaring waarom er 14 keer zo veel Grote Piepers als Duinpiepers worden gevangen terwijl er meer dan twee keer zo veel Duinpiepers als Grote Piepers worden geteld lijkt vooralsnog niet voorhanden.

Summary

Blyth's Pipit at Bloemendaal in November 2002 On 24 November 2002, a first-year Blyth's Pipit *Anthus godlewskii* was trapped at Kennemerduinen, Bloemendaal, Noord-Holland. Its identification was confirmed by its measurements. Its bill width (4.2 mm) was smaller than in Richard's Pipit *A richardi* or Tawny Pipit *A campestris*; tarsus length (26.1 mm) was smaller than in Richard's; and wing-tarsus ratio (3.64) ruled out (eastern subspecies of) Richard's and Paddyfield Pipit *A rufulus*. Interestingly, the hind claws appeared undamaged despite a 4 mm difference in length (10 mm left being too short for Richard's and 14 mm right being too long for Tawny). The colour pattern on the second outermost rectrix t5 was characteristic for Blyth's. This was the third or fourth record for the Netherlands; if accepted, a sighting on Texel, Noord-Holland, on 12 November 2002 would become the third. The first (and the third for Europe) was a first-winter female collected at Westenschouwen, Zeeland, on 13 November 1983 and the second was a first-year at Maasvlakte, Zuid-Holland, on 25-28 October 1996. The number of European records increased by a quarter during October-November 2002 with reports in England, Estonia, Finland (2), the Netherlands (1-2), Norway (2) and Sweden (at least 3). The autumn occurrence of Richard's and Tawny Pipits along the Kennemerland coast of southern Noord-Holland is briefly discussed. Since 1958, at least 57 Richard's Pipits and (only) four Tawny Pipits have been ringed in this region.

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Corrigenda

Bij de plaat van de twee Groenlandse Kolganzen *Anser albifrons flavirostris* (Dutch Birding 24: 327, plaat 283, 2002) werd abusievelijk vermeld dat deze werden geringd te Nijkerk, Gelderland, op 2 januari 2001; de juiste datum moet zijn 3 januari 2001.

Bij de plaat van de Mongoolse Pieper *Anthus godlewskii* (Dutch Birding 24: 376, plaat 338, 2002) werd abusievelijk de foutieve wetenschappelijke naam *Anthus gustavi* vermeld.

Bij de plaat van de Blauwstaart *Tarsiger cyanurus* (Dutch Birding 24: 379, plaat 346, 2002) werd helaas niet de juiste fotograaf vermeld. De foto werd gemaakt door Volker Dierschke (niet Jochen Dierschke). REDACTIE

In the caption of the plate of two Greenland White-fronted Geese *Anser albifrons flavirostris* (Dutch Birding 24: 327, plate 283, 2002), it is erroneoulsy stated that these birds were ringed at Nijkerk, Gelderland, Netherlands, on 2 January 2001; the correct date should be 3 January 2001.

In the caption of the plate of the Blyth's Pipit *Anthus godlewskii* (Dutch Birding 24: 376, plate 338, 2002), the scientific name was erroneously stated as *Anthus gustavi*.

In the caption of the plate of the Red-flanked Bluetail *Tarsiger cyanurus* (Dutch Birding 24: 379, plate 346, 2002), unfortunately the wrong photographer was mentioned. The photograph was taken by Volker Dierschke (not Jochen Dierschke). EDITORS

Redactiemededelingen

Naamgeving van taxa in Dutch Birding

Voor taxonomie, naamgeving en volgorde van in Nederland waargenomen taxa houdt Dutch Birding zich aan de beslissingen van de Commissie Systematiek Nederlandse Avifauna (CSNA) (Sangster et al 1999). Dit is een gevolg van afspraken tussen DBA, Nederlandse Ornithologische Unie (NOU) en SOVON Vogelonderzoek die werden gemaakt in het kader van de publicatie van Avifauna van Nederland (van den Berg & Bosman 1999, 2001, Bijlsma et al 2001).

Voor niet in Nederland vastgestelde taxa wordt in Dutch Birding in principe Sibley (1996) gevolgd (zie colofon). In de afgelopen jaren zijn talloze artikelen gepubliceerd met voorstellen tot het wijzigen van bepaalde wetenschappelijke soortnamen, zowel om taxonomische redenen (zoals toekennen van soortstatus) als vanwege afspraken met betrekking tot nomenclatuur (cf David & Gosselin 2002, Knox et al 2002). Om die reden is besloten dat Dutch Birding weliswaar voorlopig Sibley (1996) blijft volgen maar voor West-Palearctische taxa ieder jaar relevante veranderingen doorvoert. Een overzicht met veranderingen vanaf 1 januari 2002 werd gepubliceerd in Redactie Dutch Birding (2002). Vanaf 1 januari 2003 worden door Dutch Birding wederom enkele veranderingen doorgevoerd (zie tabel 1). Deze wijzigingen hebben voor een deel betrekking op taxa die op de Nederlandse lijst staan en derhalve nog door de CSNA bevestigd dienen te worden. De wijzigingen van overige taxa werden genomen na consultatie van CSNA-leden maar vallen buiten de formele beslissingsbevoegdheid van de CSNA. De redactie van Dutch Birding streeft ernaar om jaarlijks in januari een overzicht van wijzigingen in wetenschappelijke naamgeving te presenteren.

TABEL 1 Vanaf 1 januari 2003 door Dutch Birding gebruikte nieuwe wetenschappelijke namen van West-Palearctische (WP) taxa. Soorten aangeduid met * staan op de Nederlandse lijst; deze besluiten vallen onder de verantwoordelijkheid van de CSNA / New scientific names for Western Palearctic (WP) taxa used in Dutch Birding from 1 January 2003. Species indicated with * are on the Dutch list; these decisions are delegated to the Dutch committee for avian systematics (CSNA).

Wenkbrauwalbatros / Black-browed Albatross *Thalassarche melanophris* (was *Diomedea melanophris)* (Nunn et al 1996, Sangster et al 2002).

Geelneusalbatros / Yellow-nosed Albatross *Thalassarche chlororhynchos* (was *Diomedea chlororhynchos*) (Nunn et al 1996, Sangster et al 2002).

Witkapalbatros / Shy Albatross *Thalassarche cauta* (was *Diomedea cauta*) (Nunn et al 1996, Sangster et al 2002). Buiten / outside WP, Grijskopalbatros / Grey-headed Albatross wordt / becomes *Thalassarche chrysostoma* (was *Diomedea chrysostoma*) en / and Bullers Albatros / Buller's Albatros wordt / becomes *Thalassarche bulleri* (was *Diomeda bulleri*) (cf Nunn et al 1996).

*Scheeuwarend / Lesser Spotted Eagle *Aquila pomarina* wordt monotypisch / becomes monotypic. Buiten / outside WP, Indische Schreeuwarend / Indian Spotted Eagle wordt / becomes *A hastata* (was *A p hastata*) (Parry et al 2002).

*Rosse Franjepoot / Red Phalarope *Phalaropus fulicarius* (was *P fulicaria*) (David & Gosselin 2002).

*Pontische Meeuw / Pontic Gull *Larus cachinnans* (was *L cachinnans cachinnans*) (Yésou 2002). Buiten / outside WP, Barabameeuw / Baraba Gull wordt / becomes *L barabensis* (was *L cachinnans barabensis*), Mongoolse Meeuw / Mongolian Gull wordt / becomes *L vegae mongolicus* (was *L cachinnans mongolicus*) en / and Vega Meeuw / Vega Gull becomes *L vegae vegae* (was *L vegae*). *L vegae* wordt / becomes Oost-Siberische Meeuw / East-Siberian Gull (cf Yésou 2002).

*Witwangstern / Whiskered Tern *Chlidonias hybrida* (was *C hybridus*) (David & Gosselin 2002).

*Iberische Tjiftjaf / Iberian Chiffchaff *Phylloscopus ibericus* (was *P brehmii*) (Svensson 2001, Salomon et al 2003).

*Vuurgoudhaan / Firecrest *Regulus ignicapilla* (was *R ignicapillus*) (David & Gosselin 2002).

Blauwe Ekster / Iberian Azure-winged Magpie *Cyanopica cooki* (was *C cyanus cooki*) (Fok et al 2002). Buiten / outside WP, *C cyanus* wordt / becomes Aziatische Blauwe Ekster / Asian Azure-winged Magpie.

Ovenvogel / Ovenbird *Seiurus aurocapilla* (was *S aurocapillus*) (David & Gosselin 2002).

*Grauwe Gors / Corn Bunting *Emberiza calandra* (was *Miliaria calandra*) (cf Grapputo et al 2001, Lee et al 2001).

Summary

TAXA NAMES IN DUTCH BIRDING From 1 January 2003, Dutch Birding will use new names or new taxonomic treatments for several taxa (see table 1). For taxa on the Dutch list, these decisions remain to be considered by the Dutch committee for avian systematics (CSNA), as is the case for a number of decisions introduced on 1 January 2002. For WP taxa not (yet) recorded in the Netherlands, Dutch Birding follows the advice of CSNA members.

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Wijzigingen binnen redactie Met ingang van 1 januari 2003 is een aantal wijzigingen doorgevoerd binnen de redactie. Diederik Kok, Peter Meininger en Gerald Oreel hebben de redactie verlaten. Zij worden vervangen door twee nieuwe redacteuren: Magnus Robb uit Amsterdam, Noord-Holland, die al actief was als lid van de redactieadviesraad en bekend vanwege zijn kennis van opname en sonografische analyse van vogelgeluiden; en Marten van Dijl uit Dordrecht, Zuid-Holland, bekend als vogelfotograaf en al enige tijd voor de DBA actief als fotografisch redacteur van de Dutch Birding-website (www.dutchbirding.nl). Jan van der Laan is gevraagd om als redactiemedewerker te helpen bij de begeleiding van herkenningsartikelen. Voor een volledig overzicht van de leden van de redactie (kernredactie en redactieraad) en redactieadviesraad en van de redactiemedewerkers wordt verwezen naar het colofon. REDACTIE

Changes in editorial board On 1 January 2003, Diederik Kok, Peter Meininger and Gerald Oreel have left the editorial board of Dutch Birding. Magnus Robb and Marten van Dijl have joined the editorial board (Magnus was already a member of the editorial advisory board and Marten was already the photographic editor of the Dutch Birding-website, www.dutchbirding.nl). Jan van der Laan will become editorial assistant for identification papers. For a full line-up of editors, advisory board and editorial assistants, see the colofon. EDITORS

Masters of Mystery

Solutions of sixth round 2002

The solutions of the final mystery photographs XI and XII (Dutch Birding 24: 362, 2002) of the 2002 Masters of Mystery competition appear below.

XI The wader in mystery photograph XI must be a fresh juvenile, according to the neatly patterned upperparts. The pattern on the scapulars and tertials, the whitish rump or uppertail and the relatively small head fit only members of the genus *Limosa*. Dowitchers *Limnodromus* would show a variable amount of subterminal spots on the tertials, while the notches on the tertials of *Pluvialis* plovers, curlews *Numenius* and *Tringa* sandpipers extend from the top to the base. Species from all these genera were found among the answers of the entrants. Some opted for Ruff *Philomachus pugnax*, but juveniles of this species show neatly fringed scapulars and tertials, in contrast with the mystery bird.

Of the genus *Limosa*, three species have been recorded in the Western Palearctic: Black-tailed *L limosa*, Hudsonian *L haemastica* and Bar-tailed Godwit *L lapponica*. From these, Hudsonian can be ruled out most easily because this species would show much more drab-grey coverts, evenly fringed buffish, and a darker crown. Although some juvenile Hudsonian can be fairly brightly coloured, they probably never show such strongly patterned scapulars, tertials and coverts as the mystery bird.

Bar-tailed Godwit shows dark-brown centres to the mantle-feathers, scapulars and tertials with numerous buffish or pale-buffish notches, which extend along the whole fringe of the feathers. The inner coverts and especially the tertial-coverts show ill-defined pale-buff notches on the fringes.

Black-tailed Godwit shows dark-brown, almost blackish centres to the mantle-feathers, scapulars and tertials, the latter with a dull-grey base. All these feathers tend to show less obvious buffish notches along the fringe. The exact pattern of these feathers, however, is subject to variation and especially the pattern of the scapulars can approach the pattern of Bar-tailed Godwit. In contrast with Bar-tailed, the notches on the tertials, if present at all, are generally confined to the distal part of the feathers. The notches, although much less numerous, often extend much further towards the shaft, creating bars. Although there is variation in both species, the pale sections of the upperparts of Black-tailed tend to be more cinnamon or even orange than the usually quite cold buffish tone of Bar-tailed.

Returning to our mystery bird, one can see the dark black-brown feather centre to the mantle-feathers, scapulars and tertials. The longer tertials show a grey base and only notches on the distal part, creating a subterminal bar. The tertial-coverts are only fringed buff and lack any notches.

The centre of the uppertail of the mystery bird is just visible and looks uniformly dark brown or blackish. As their names suggest, this is shown by Black-tailed Godwit, while Bar-tailed Godwit (in any plumage) shows a fine pattern of dark brownish and pale whitish bars.

Based on these characters, this bird is a Black-tailed Godwit; it was photographed on 4 Septem-

28 Icelandic Black-tailed Godwit / IJslandse Grutto *Limosa limosa islandica*, juvenile, Belfast, Northern Ireland, 4 September 2002 *(Anthony McGeehan)*

ber 2002 at Belfast, Northern Ireland, by Anthony McGeehan. Another picture of the same bird is shown in plate 28. It belongs to the subspecies *L l islandica*, known as Icelandic Black-tailed Godwit. This probably accounts for the orange-cinnamon colouration of the notches, as juvenile Icelandic generally tend to be brighter orange on the upperparts as well as on the head and breast. In addition, the pattern on the scapulars tends to be intermediate between typical nominate Black-tailed and Bar-tailed Godwit. The pattern on the mystery bird's scapulars approaches the pattern of Bar-tailed.

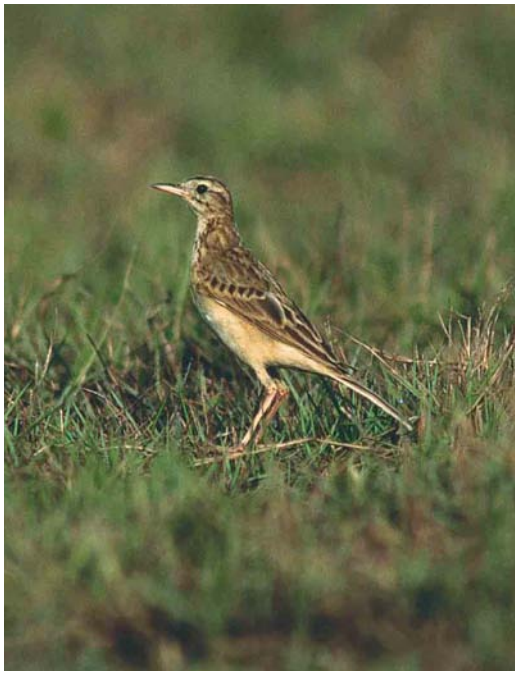
This mystery bird was identified correctly by 21% of the entrants. None of the entrants identified the bird on subspecific level as Islandic Black-tailed Godwit. Wrong answers included Bar-tailed Godwit (15%), Ruff (19%), Eurasian Curlew *N arquata* (21%) and Common Redshank *T totanus* (8%).

XII The final mystery photograph of the 2002 competition clearly shows one of the representatives of the pipits *Anthus*. The smaller species like Tree Pipit *A trivialis* and Meadow Pipit *A pratensis* are easily ruled out, since all these smaller species, except Berthelot's Pipit *A berthelotii*, show distinct flank streaks. Berthelot's, however, would show a dark loral stripe, a finer bill and pale tips to the median coverts forming an obvious wingbar. All these characters are not shown by the mystery bird.

This leaves the choice to one of the larger species: Richard's *A richardi*, Blyth's *A godlewskii*, Tawny *A campestris* and Long-billed Pipit *A similis*. Of these, Long-billed Pipit is most easily excluded. This species shows a very long bill with a curved upper mandible which makes the tip of the bill seem to point downwards. Furthermore, Long-billed generally shows a distinct dark loral stripe and the breast-streaks are normally diffuse and less well-marked in this species compared with the mystery bird. The fine but distinct breast-streaks of the mystery bird may well indicate a first-winter Tawny Pipit. However, that species would also show a distinct dark loral stripe, much more obvious than the greyish loral patch shown by the mystery bird. Moreover,

29 Blyth's Pipit / Mongoolse Pieper *Anthus godlewskii*, Goa, India, 9 March 2002 *(Diederik Kok)*. Note blunt, almost square, dark centre of adult type median coverts.

30 Richard's Pipit / Grote Pieper *Anthus richardi*, Goa, India, 10 March 2002 *(Diederik Kok)*. Note pointed dark centre of adult type median coverts.



Mystery photograph I (March)

Mystery photograph II (September)

Tawny has a rather short hindclaw, at least much shorter than shown by the mystery bird.

So, the choice is between Richard's Pipit and Blyth's Pipit and to tell both species apart is a matter of carefully evaluating all known discriminating identification characters. Richard's is noticeably larger than Blyth' with a longer tail. However, these characters are of no use when looking at a single photograph of a bird sitting in a tree instead of displaying its well-known behaviour of walking on bare ground or creeping among tussocks. The bill of Richard's is stout and quite long, whereas in Blyth's, the bill is much shorter and somewhat pointed, creating a more triangular impression, comparable with the mystery bird. Other differences can be found in the head pattern. The supercilium, for instance, is broad and strong both before and behind the eye in Richard's. In Blyth's, the supercilium is mostly less prominent and reduced in front of the eye. In addition, in most Blyth's, the supercilium is even more restricted behind the eye, contrasting with and obscured by quite heavy streaks on the rear supercilium. In the mystery bird, the supercilium is quite prominent only above the eye and seems to be less broad and prominent both in front and behind the eye, favouring Blyth's. Another strong character in favour of Blyth's is the pattern on the moulted central median coverts. At least one is visible and although slightly worn, the diagnostic pattern of a blunt dark centre with a broad buffish tip is still visible. In Richard's, the central median coverts would show a pointed dark centre.

This Blyth's Pipit was photographed in Goa, India, in March 2002 by Diederik Kok. Another picture of the same bird is shown in plate 29. This bird was correctly identified by 23% of the entrants. Incorrect answers included Richard's (29%), Berthelot's (26%), Tawny (13%) and Long-billed Pipit (5%).

Only two entrants managed to identify both mystery birds correctly: Daniel Kratzer (Germany) and Marijn Prins. Marijn Prins was the lucky winner of the draw and wins a copy of the Helm identification guide *Sylvia warblers* by Hadoram Shirihai, Gabriel Gargallo and Andreas Helbig donated by A&C Black (Publishers) Ltd. Congratulations to him!

After six rounds, Martin Gottschling (Germany) is the overall winner of the Masters of Mystery 2002 competition and wins the Swarovski AT 80 telescope with a 20-60x zoom eyepiece, donated by Swarovski Benelux. He managed to identify 10 out of 12 mystery birds correctly and leaves the runners-up at quite some distance. Axel Halley (Germany) and Hannu Huhtinen (Finland) identified eight mystery birds correctly, followed by Daniel Kratzer (Germany), Magne Pettersen (Norway) and Paavo Sallinen (Finland), with seven correct identifications. Joris Elst (Belgium) finished with a total of six correct identifications. The final overview of the entrants with five or more correct answers can be viewed at www.dutchbirding.nl.

We would like to thank the following people for their help with the Masters of Mystery 2002 competition: Gary Bellingham, Arnoud van den Berg, Ruud Brouwer, Diederik Kok, Eric Koops, Anthony McGeehan, René Pop, Peter van Rij, Marcel Scholte and Ray Tipper for lending their photographs; Arnoud van den Berg, Gunter De Smet, Nils van Duivendijk, Enno Ebels, Diederik

Kok, and André van Loon for commenting on the texts; Gijsbert van der Bent, Rob Olivier and André van der Plas for taking care of the website and help in some other way and of course Gino Merchiers from Swarovski Benelux for sponsoring this competition.

First round 2003

Photographs I and II represent the first round of the 2003 competition. Please, study the rules below carefully and identify the birds in the photographs. Solutions can be sent in three different ways:

- by *postcard* to Dutch Birding Association, Postbus 75611, 1070 AP Amsterdam, Netherlands
- by e-mail to masters@dutchbirding.nl
- from the website of the Dutch Birding Association at www.dutchbirding.nl

Entries for the first round have to arrive by **1 March 2003**. From those entrants having identified both mystery birds correctly, one person will be drawn who will receive a copy of the Helm identification guide *Sylvia warblers* by Hadoram Shirihai, Gabriel Gargallo and Andreas Helbig, donated by A&C Black (Publishers) Ltd. Swarovski Benelux generously agreed to sponsor this competition this year again, this time with a pair of marvellous SLC 10x50 WB binoculars. The overall winner after six rounds will win these Swarovski binoculars.

Swarovski SLC 10x50 WB binoculars

Rules

Only subscribers to Dutch Birding are eligible to enter. Excluded from entry are the editors and members of the editorial board of Dutch Birding and the members of the board of the Dutch Birding Association. Photographers whose work is used in the competition (both as mystery birds or as photographs accompanying the solutions) are excluded from entry in the round(s) in which their work is used. Also, the overall winner (after six rounds) of one edition is excluded from the competition in the subsequent year.

Each round usually consists of two mystery photographs, but sometimes only one or more than two can be presented.

For each round, only one entry per person is accepted (which will be the first received). Entries have to arrive by the closing date stated. The Dutch Birding Association cannot be held responsible for possible non-receipt or loss of entries.

All species in the photographs have been recorded in the Western Palearctic as defined in *Birds of the Western Palearctic* (BWP). Hybrids will not be featured.

Each mystery bird must be identified at the level of species. In this competition, decisions of the Commissie Systematiek Nederlandse Avifauna (Dutch committee for avian systematics; CSNA) are followed (see, for example, Dutch Birding 19: 21-28, 1997; 20: 22-32, 1998). For taxa not dealt with in these references, further changes adopted by the editors of Dutch Birding from 2002 onwards apply (Dutch Birding 24: 22-24, 2002; 25: 49-50, 2003).

In case of any dispute concerning the identity of a bird, the decision of the editorial board of Dutch Birding will be binding on all parties.

The overall winner will be the entrant who has correctly identified most mystery photographs during the competition (six rounds). In case of joint winners, one winner will be drawn.

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WP reports

This review lists rare and interesting birds reported in the Western Palearctic mainly in **November 2002-early January 2003** and focuses on north-western Europe. Some earlier reports and additions for early January 2003 are also included in this review. The reports are largely unchecked and their publication here does not imply future acceptance by the rarities committee of the relevant country. Observers are requested to submit records to each country's rarities committee. Corrections are welcome and will be published.

SWANS TO FRANCOLINS The first **Whooper Swans** *Cygnus cygnus* for the Arabian peninsula were a flock of six in Oman in December. From 17 November onwards, up to 34 **Lesser White-fronted Geese** *Anser erythropus* (most of them without rings) occurred in Hoekse Waard, Zuid-Holland. In Hungary, up to 53 were counted in November (six were colour-ringed in Norway and more than half were juveniles). Several **Ross's Geese** *A rossii* were seen in the Netherlands. In Britain, white adults were at Caerlaverock, Dumfries and Galloway, Scotland, and in Cumbria and Norfolk, England, from October to January. In Italy, single **Red-breasted Geese** *Branta ruficollis* turned up in Trieste and Piemonte in early January. The first **Canvasback** *Aythya valisineria* for the Netherlands was an unringed and fully-winged male south of Castricum aan Zee, Castricum, Noord-Holland, from 9 to at least 18 January. It is possible that it concerned one of the two males wintering in Essex and Kent, England, in the winters of 1998/99, 1999/2000 and 2000/01 (last seen in Essex on 13 February 2001 and near Dungeness, Kent, on 8 March 2001); these two were not found again in the winters of 2001/02 and, so far, 2002/03. Previous records for Europe included a female collected on 11 April 1977 in Iceland, a female (still under consideration) on 21-23 June 2000 in Orkney, Scotland, and up to five males in England from 18 January 1997 onwards (including those of Essex and Kent); other reports (eg, in Germany) were proven or presumed escapes. In Sicily, Italy, 48 **Ferruginous Ducks** *A nyroca* (only) were counted at Lentini lake in December (in the past two winters, the totals were 180 and 250). In Galicia, Spain, 10 **Ring-necked Ducks** *A collaris* were present during December, including six females and an immature male at Traba lagoon on 21-22 December. There were also quite a few in other countries in western Europe, including Britain, France, Germany, Ireland, the Netherlands (from 12 January) and Norway. On 4 January, a male and a female were present at Lagoa Azul, São Miguel, Azores, together with a female **Lesser Scaup** *A affinis*. First three, later two first-

31 Grey-morph egret / grijze zilverreiger *Egretta*, adult, Tavira, Portugal, 3 November 2002 *(Ray Tipper)*

winter male Lesser Scaups in Dumfries and Galloway, Scotland, remained through December into January. One of two females present since November on South Uist, Outer Hebrides, Scotland, was still seen on 11 December. Last year's male at Little Sea, Dorset, England, was back from 18 December and still present in mid-January. Furthermore, eg, a female was reported at Glamorgan, Wales, on 30 December, a first-winter male in Hertfordshire, England, on 4 January and a male in East Yorkshire on 11 January. In Wales, the male **Redhead** *A americana* which had returned in Glamorgan by 21 September was still present on at least 18 January. The first **White-headed Duck** *Oxyura leucocephala* for more than 25 years in the Po delta in north-eastern Italy was found at Valli di Comacchio on 10 January. In France, one was at Lac Grand-Lieu, Loire-Atlantique, on 27 November (nine occurred here during the influx in September 2000). An adult **Steller's Eider** *Polysticta stelleri* found on Sylt, Schleswig-Holstein, Germany, on 31 December was still present in January. The male **Black Scoter** *Melanitta americana* at Llanfairfechan, Gwynedd, Wales, was present for another winter from 3 November into January. From 14 December, the adult male **Surf Scoter** *M perspicillata* wintering for many years at Lista, Vest-Agder, Norway, was accompanied by a first-winter. As usual, quite a few were seen in Britain and Ireland with, eg, up to eight males in Scotland in November alone. In Israel, a **Smew** *Mergellus albellus* was at Ma'ayan Tsvi, Carmel coast, on 6-7 December. An immature male **Blue-winged Teal** *Anas discors* visited Roquito del Fraile, Tenerife, Canary Islands, from 8 to at least 15 November (when a first-winter **Ring-billed Gull** *Larus delawarensis* was seen there as well). In Ireland, a male **American Black Duck** *A rubripes* was at Lough Leam, Mayo, from 17 November into January. In Scilly, England, another was present in late December. In the Douz area, Tunisia, c 760 **Marbled Ducks** *Marmaronetta angustirostris* were counted on 2 December. The first records of **Black Francolin** *Francolinus francolinus* since 1986 for Georgia concerned two males along the Iora river on 20-21 November.

LOONS TO SPOONBILLS In the Azores, **Great Northern Loons** *Gavia immer* were found at Ponta Delgada on São Miguel on 28 December and at Cabo da Praia on Terceira on 2 January. In November-December, no less than 12 were seen in the Netherlands and, in December alone, nine in Germany. The latest ever **Balearic Shearwater** *Puffinus mauretanicus* for the Netherlands flew past Langevelderslag, Zuid-Holland, on 8 December. A **Leach's Storm-petrel** *Oceanodroma leucorhoa* was present at Jaffa port, Israel, on 20-21 December. The 11th **Pygmy Cormorant** *Microcarbo pygmeus* for the Czech Republic was at Hermanicky near Ostrava, northern Moravia/Silesia, from late October into November. The adult at Bodensee, Baden-Württemberg, Germany, on 4 January may have been the same bird as in previous years. In the Azores, there were (still) three **Double-crested Cormorants** *Hypoleucos auritus* at Mosteiros, São Miguel, on 4 January. In Spain, a group of three **Great White Pelicans** *Pelecanus onocrotalus* were seen at Caño de Guadiamar, Aznalcazar, Sevilla, on 5 November. An unringed **Dalmatian Pelican** *P crispus* at Hompelvoet, Grevelingen, Zuid-Holland, in December 1975 and at Mokkebank and Mirnseklif, Friesland, in January 1976 has recently been accepted as the first since c 1500 years for the Netherlands; the species had breeding colonies in estuaria of Rhine and Scheldt in the first centuries. The **grey-morph egret** *Egretta*, which was originally discovered in December 2000, had returned to Tavira, Portugal, for its third consecutive winter, thus offering an unprecedented opportunity to compare plumage details over a period of years (cf Dutch Birding 23: 97, plate 113, 2001). Already, it has confounded the theory that grey-morph egrets are immatures that moult into all white or all dark grey birds (cf Birdwatch 108: 32-36, 2001; Ray P Tipper in litt). A dark-morph **Western Reef Egret** *E gularis* at Portesine, Po delta, north-eastern Italy, on 5 December may have been present for at least a year. At least 320 **Great Egrets** *Casmerodius albus* were counted near Oristano, Sardinia, Italy, in early November. At Loch Torornish, South Uist, an **American Great Egret** *C a egretta* was present from 10 November onwards. An unseasonal **Black Stork** *Ciconia nigra* was at Niederriedstausee, Bern, Switzerland, on 3 January. A record 760 **Glossy Ibises** *Plegadis falcinellus* were counted at a roost in the Doñana marshes, Huelva, Spain; besides, 61 were seen in ricefields near Illa de Buda, Ebro delta, Tarragona, on 27 December. Captive-bred **Northern Bald Ibises** *Geronticus eremita* are to be re-introduced in Austria and taught to migrate to a wintering site in Italy by imprinting birds to follow a microlight aircraft (World Birdwatch 24 (4): 5, 2002). The feral population at Bireçik, Turkey, had a successful breeding season in 2002 with 17 young raised. On 8 December, a flock of at least 110 were seen in a field at Tamri, Morocco. In Sardinia, an exceptional flock of 100-120 **Eurasian Spoonbills** *Platalea leucorodia* was at Macchiareddu on 20 October. In Tainan, Taiwan, no less than 71 **Black-faced Spoonbills** *P minor* had died from botulism by 11 January; this constituted more than 7% of the world population.

RAPTORS On 8 November, a first-year **Pallid Harrier** *Circus macrouros* was seen at Bedburg-Rath, Erftkreis, Nordrhein-Westfalen, Germany. The latest ever for Denmark was a juvenile in Sydsjælland on 18-24 November. In Sicily, a male was observed at Lago Arancio in early December. In England, a remarkably late first-winter female remained in Norfolk from 23 December to at least 18 January. The **Long-legged Buzzard** *Buteo rufinus* present at Gut Seligenstadt, Kitzingen, Bavaria, from 5 September was still seen on 29 December. In Sweden, one flew past Falsterbo, Skåne, on 2 November. Another was at San Vincenzo in central Italy on 26 December. Remarkably, two or three were present in the Camargue and Crau, Bouches-du-Rhône, France, to at least mid-January. A minor influx of c 10 **Rough-legged Buzzards** *B la-*

32 Intermediate Canada Goose / Middelste Canadese Gans *Branta canadensis parvipes*, with Barnacle Goose / Brandgans *B leucopsis* and hybrids Intermediate Canada x Barnacle Goose, Islay, Argyll, Scotland, November 2002 *(Chris Batty)*

33 Long-billed Dowitcher / Grote Grijze Snip *Limnodromus scolopaceus*, adult, Sohar, Oman, 10 December 2002 *(Ray Tipper)*

gopus occurred in eastern France during December and the same influx probably accounted for the first twitchable individual in Belgium for c 10 years. In the Czech Republic, an unprecedented flock of eight first-years were seen on a field near Unicov, central Moravia, on 5 November. The fourth for Sardinia flew past Cagliari on 17 October. **Greater Spotted Eagles** *Aquila clanga* were seen at Pavia, northern Italy, on 14 October, at Bozzole, north-western Italy, on 6 December and at Torre di Fine, north-eastern Italy, on 29 December. In the Netherlands, the first-year last seen on 11 October at Oostvaardersplassen, Flevoland, was claimed again on 5 December; on 4 January, this or another bird was observed at Slikken van Flakkee, Zuid-Holland. In France, one was wintering at the usual site near Saint-Martin-de-Seignanx, Landes, from November and another was at Lac du Der, Marne, from 13 November to at least 30 December. In the Camargue, up to three were present from 4 November to early January. For Hungary, it was the species' best autumn ever with nine in November. A late pale-morph **Booted Eagle** *Hieraaetus pennatus* was at Gabel Asfar, Egypt, on 25 December. White **Gyr Falcons** *Falco rusticolus* were seen in Galway, Ireland, on 12 November, in Shetland, Scotland, on 24 November and on St Mary's, Scilly, on 15-23 December. A **Saker Falcon** *F cherrug* at Vasche di Maccarese, Roma, Italy, from early November to at least January attracted many birders. A juvenile occurred at Foce del Simeto, south-eastern Sicily, on 17 December. A **Merlin** *F columbarius* was seen at Tiscamanita, Fuerteventura, Canary Islands, on 13 November.

SWAMP-HENS TO WADERS Three adults and a locally-bred juvenile **African Swamp-hen** *Porphyrio madagascariensis* at Yeruham, northern Negev, Israel, remained until at least late December. The second **American Coot** *Fulica americana* for Spain was at Pontevedra, Galicia, from 5 January onwards (the first was in 1999). The first **Siberian Crane** *Grus leucogeranus* for Hong Kong, China, and the first south of the Yangtze valley was a first-winter at Mai Po on 11-12 December. A female **Greater Painted-snipe** *Rostratula benghalensis* stayed at Ma'agan Michael, Israel, on 23-30 November. A **Killdeer** *Charadrius vociferus* at Godrevy, Cornwall, England, on 20 November may have been the same as the first-year on St Agnes, Scilly, on 4-10 November. A **Greater Sand Plover** *C leschenaultii* remained at Hirel, Ille-et-Vilaine, France, from 7 September to at least early January. A **Sociable Lapwing** *Vanellus gregarius* on 17-24 November in Bern, Switzerland, frequented the same few square kilometres where no less than four singles were seen during 2000-01. Another one was in the Camargue on 23-28 November. A **White-tailed Lapwing** *V leucurus* visited Kfar Ruppin, Israel, on 2 November. In the Azores, two **Semipalmated Sandpipers** *Calidris pusilla* were (still) present at Cabo de Praia, Terceira, on 2 January. A **Baird's Sandpiper** *C bairdii* was reported at Parc du Teich, Gironde, France, on 14 November. Unseasonal **Pectoral Sandpipers** *C melanotos* were at Herdla, Hordaland, Norway, from 7 November to at least 8 December and at Villars-les-Dombes, Ain, France, from 21 November. The first-winter **Stilt Sandpiper** *Micropalama himantopus* found on Unst, Shetland, on 5 November was last seen on 7 November. The **Long-billed Dowitcher** *Limnodromus scolopaceus* wintering in Oman since 1997 was again present at Sohar during December (cf Dutch Birding 23: 158, plate 177, 161, 2001). Other long-stayers were at Guissény, Finistère, France, from 4 October to 1 December and at Inver Bay, Highland, Scotland, from 8 November to at least 10 January. In Ireland, a long-stayer was at Clonakilty, Cork, from 30 November to at least 30 December. On 27 September, five **Slender-billed Curlews** *Numenius tenuirostris* were claimed from the Hortobágy, Hungary (Br Birds 95: 662, 2002); if accepted, this would be the first record anywhere since 1997. In Spain, a **Lesser Yellowlegs** *Tringa flavipes*, slightly oiled by the Prestige tanker disaster, remained the entire period at Ponteceso-Canana, Galicia, and another was reported at Aiguamolls de l'Emporda, Catalunya, on 4 December. In England, a juvenile stayed at Cantley, Norfolk, from 8 November onwards. In Germany, one remained at Weissenburg, Bavaria, from 17 November to 6 December. The second **Spotted Sandpiper** *Actitis macularia* for Italy was a juvenile at Saline di Augusta, Siracusa, Sicily, from 9 December to at least 10 January.

GULLS TO AUKS The first **Pallas's Gull** *L ichthyaetus* for Korea was photographed on the Han river near Seoul on 1 December. In Sicily, an adult and a first-winter stayed at the usual site of Lentini lake, Siracusa, from 22 December (besides, up to 10 **Baltic** *L fuscus*, 800 **Lesser Black-backed** *L graellsii* and 300 **Pontic Gulls** *L cachinnans* were counted here that day). On 18 January, an adult **Pallas's Gull** was discovered in Sachsen-Anhalt, Germany. An adult **Franklin's Gull** *L pipixcan* found at Stanford Reservoir, Leicestershire, England, on 3 November was not seen after 10 November. In western France, one was seen off Cap Fréhel, Côtes d'Armor, on 11 November. A second-winter was observed at Laredo, Cantabria, Spain, on 21-24 December. If accepted, a juvenile **Sabine's Gull** *L sabini* off Jaffa on 20 December was the third for Israel. The third **Bonaparte's Gull** *L philadelphia* for Sweden was found at Utlängen in south-eastern Blekinge on 3 January. In Ireland, a first-winter visited Inchydoney, Cork, from 29 December to at least 7 January. In Norway, the ringed **Ring-billed Gull** was back at Bergen, Hordaland, on 14 November, for its ninth consecutive winter (in summer, this commuting bird has been recorded in Newfoundland, Canada). The male present for its sixth consecutive winter at Goes, Zeeland, the Netherlands, remained until at least 4 January. Along the western coasts of France, a total of c 10 were reported for December. On 29 December, a first-winter was frequenting the Funchal harbour on Madeira. A third-winter **American Herring Gull** *L smithsonianus* stayed at Cobh, Cork, from 12 December into January. A juvenile/first-winter **Yellow-legged Gull**




34 Forster's Tern / Forsters Stern *Sterna forsteri*, Belmullet Peninsula, Mayo, Ireland, 30 November 2002 *(Paul Kelly)* **35** Snowy Owl / Sneeuwuil *Nyctea scandiaca*, Belmullet Peninsula, Mayo, Ireland, 30 November 2002 *(Paul Kelly)* **36** Siberian Crane / Siberische Witte Kraanvogel *Grus leucogeranus*, juvenile, Mai Po, Hong Kong, China, 10 December 2002 *(Yu Yat-tung)* **37** Ross's Gull / Ross' Meeuw *Rhodostethia rosea*, Ulm, Baden-Württemberg, Germany, 6 December 2002 *(Tobias Epple)*

L michahellis colour-ringed on Mendes island off north-eastern Spain in late May 2002 was subsequently seen at several sites in Noord-Holland, in early August (Hondsbossche Zeewering), October (IJmuiden) and December (Amsterdam). The first **Great Black-backed Gull** *L marinus* for Malta was an adult at Elmo on 31 December. An adult **Kumlien's Gull** *L glaucoides kumlieni* was photographed at Glommen, Halland, Sweden, on 10 January. In Kerry, Ireland, a **Ross's Gull** *Rhodostethia rosea* was briefly seen on 21 November. An adult was present between Öpfingen and Griesingen near Ulm, Baden-Württemberg, Germany, on 5-6 December. In Wales, a first-winter **Ivory Gull** *Pagophila eburnea* was showing well at Blackpill, Swansea, South Wales, from 28 November to 5 December. Unseasonal **Gull-billed Terns** *Gelochelidon nilotica* were an adult and a first-winter at Lentini lake, Sicily, from 22 December. In the Netherlands, 13 **Sandwich Terns** *Sterna sandvicensis* were present at the species' regular winter site of Brouwersdam, Zeeland, until at least 23 November (before the first cold spell). In Ireland, **Forster's Terns** *S forsteri* were seen at Blennerville, Kerry, between 9 September and 29 December, at Lough Leam and Belmullet Peninsula, Mayo, from 24 November into January, and at Baldoyle, Dublin, on 5-6 January. In Cornwall, a first-winter was at Hayle Estuary from 24 November onwards. In Scotland, one was at Oban Bay, Argyll, from 9 January onwards. From 13 January, one was present at St-Pol-de-Léon, Finistère, France. A **Brünnich's Murre** *Uria lomvia* was identified at Hvaler (the entrance of Oslofjord), Østfold, Norway, on 17 November.

DOVES TO WAXWINGS In the Netherlands, an unseasonal **European Turtle Dove** *Streptopelia turtur* stayed at Julianadorp, Noord-Holland, until 29 December.

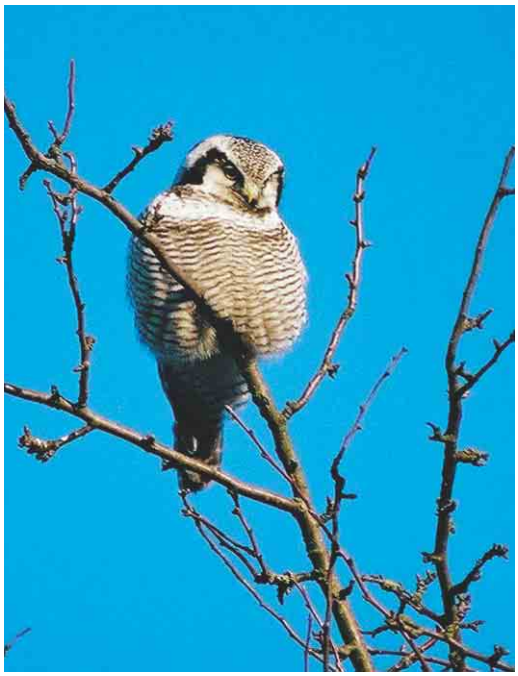



38-39 Oriental Turtle Dove / Oosterse Tortel *Streptopelia orientalis*, first-winter, Stromness, Orkney, Scotland, 6 December 2002 *(Chris Batty)* **40** Azure Tit / Azuurmees *Parus cyanus*, Masugnsbyn, Torne Lappmark, Sweden, 10 December 2002 *(Michael Bergman)* **41** Savannah Sparrow / Savannahgors *Passerculus sandwichensis*, Fajagrande, Flores, Azores, 31 October 2002 *(Kris De Rouck)* cf Dutch Birding 24: 381, 2002

Another at Litvatnet, Sør-Trøndelag, Norway, was last seen on 1 January. The first **Oriental Turtle Dove** *S orientalis meena* for Britain since 1975 was a first-winter at Stromness, Orkney, from late November until 26 December. If accepted, a nominate Oriental Turtle Dove *S o orientalis* at Eilat on 2 November will be the sixth for Israel and the third this autumn. Also in Israel, at least 12 **Striated Scops Owls** *Otus brucei* were found during December, in remote wadis over the southern Arava and Eilat mountains. In Ireland, an adult male **Snowy Owl** *Nyctea scandiaca* took residence at Belmullet Peninsula, Mayo, from 23 November through December. From the second week of December onwards, a **Northern Hawk Owl** *Surnia ulula* visited Bialowieza, Poland. The latest ever **Pallid Swifts** *Apus pallidus* for Britain were at Exe Estuary, Devon, and at Christchurch, Dorset, on 22 November and in Kent on 29 November. The first **Alpine Swift** *A melba* staying for longer than 24 h at one site in the Netherlands was at Wageningen, Gelderland, from 8 November to 4 December, when it was taken into care. It appeared weakened with a weight of 65 g (the species normal weight being 90-120 g); it was still recovering in captivity in early January. In Egypt, six **White-throated Kingfishers** *Halcyon smyrnensis* were noted at Gabel Asfar on 25 December and 20-25 along the Bilbeis to Abassa road in the eastern Nile delta (with 60 Pied Kingfishers *Ceryle rudis*) on 26 December. In Israel, 13 **Oriental Skylarks** *Alauda gulgula* were seen at five sites during November. A survey of **Raso Lark** *A razae* on Raso, Cape Verde Islands, in 2001 resulted in an estimate of 128-138 individuals, of which 61-66% were males (World Birdwatch 24 (4): 3, 2002). In Sicily, five **Richard's Pipits** *Anthus richardi* and four **Red-throated Pipits** *A cervinus* were found at two sites on 7 December; by late December, a total of 11

Richard's were wintering here. In France, seven were present at Mas Chauvet, Crau, on 21 December (still three in early January). An unprecedented influx of 10-12 **Blyth's Pipits** *A godlewskii* occurred in north-western Europe. The second this autumn for Norway was videoed at Ogna, Jæren, Rogaland, on 19 November and the second to fourth this autumn for Sweden were on 2-7 November in Västerbotten, on 10-19 November at Göteborg, Västergötland, and (probably) on 21 November at Utlängan, Blekinge. The third and fourth ever for the Netherlands (if accepted) were seen for 15 min by one observer on Texel, Noord-Holland, on 12 November and trapped at Bloemendaal, Noord-Holland, on 24 November. From 29 December to at least 4 January, one visited Gringley Carr, Nottinghamshire, England. The third **Water Pipit** *A spinoletta* for Norway discovered at Obrestad, Rogaland, on 5 November was still present on 12 January. The fourth and fifth (if accepted) turned up at Jæren, Rogaland, on 15 November and at Farsund, Vest-Agder, on 8 December. An invasion of **Bohemian Waxwings** *Bombycilla garrulus* became obvious by 8 January when 400 had been seen in Britain and many in the Netherlands as well. By 18 January, 1200 were conted for Britain. Four individuals had reached northern France by 13 January.

THRUSHES TO BOBOLINK The first **Siberian Blue Robin** *Luscinia cyane* for Canada and mainland North America occurred at Dawson City, Yukon, on 9 June (Birders Journal 11: 183-184, 2002). The only previous North American record was a second-year female on Attu Island, Alaska, USA, on 21 May 1985. The latest ever **Red-flanked Bluetail** *Tarsiger cyanurus* for Britain was at Gibraltar Point, Lincolnshire, on 15-16 November. An **Isabelline Wheatear** *Oenanthe isabellina* visited Mt Carbine, Queensland, Australia, from 15 November into December. The long-staying female **Pied Wheatear** *O pleschanka* on Ouessant, Finistère, France, remained from 14 October to 18 November. The eighth for Norway (and the second this autumn) was a first-winter at Vik, Jæren, on 7-14 November. A first-winter male **Desert Wheatear** *O deserti* was present on Guernsey, Channel Islands, from 24 November to early December. The first **Red-rumped Wheatear** *O moesta* for Spain (and Europe) was a male at Cabo de Gata, Almería, on 21 December. In the Netherlands, a first-winter male **Black-throated Thrush** *Turdus ruficollis atrogularis* showing some indistinct features of Red-throated Thrush *T r ruficollis* stayed at Harlingen, Friesland, from 15 to 25 December. In Norway, a first-winter was at Hogganvik, Mandal, Vest-Agder, on 20-31 December. The first **Redwing** *T iliacus* since 1994 for Kuwayt occurred near Jahra on 20 December. An adult **Paddyfield Warbler** *Acrocephalus agricola* was trapped at Canal Vell, Ebro delta, Tarragona, Spain, on 27 November. The alleged **Sykes's Warbler** *A rama* on Ouessant on 6-7 November has been re-identified as a European Reed Warbler *A scirpaceus* (cf Dutch Birding 24: 381, 2002). The 13th **Asian Desert Warbler** *Sylvia nana* for Sweden trapped at Ottenby, Öland, on 8 November was not seen later. The first **Greenish Warbler** *Phylloscopus trochiloides* for Malta was trapped at Ghadira on 9 December. In England, unseasonal **Yellow-browed Warblers** *P inornatus* visited St Mary's, Scilly, on 12 December and Stiffkey, Norfolk, from 17 December to at least 18 January. In Slovenia, one was trapped on 13 October at Bilje, Nova Gorica. In Israel, one turned up at Yotvata on 19 November. Also in Israel, a **Hume's Warbler** *P humei* was seen at Shizzafon on 4 November. In Scilly, one stayed on St Mary's on 12-15 November. In Germany, singles were present on Helgoland, Schleswig-Holstein, on 12 November and at Bodensee, Baden-Württemberg, from 14 December to at least 12 January. In Sweden, one was seen in Skåne on 24-25 November. The **Dusky Warbler** *P fuscatus* found on St Mary's, Scilly, on 6 November remained until 27 November. Also in England, one was seen at Kessingland, Suffolk, from 30 December to at least 10 January. The **Azure Tit** *Parus cyanus* frequenting a feeder at Masugnsbyn, Torne Lappmark, Sweden, from late October was last seen on 25 December. The first **Brown Shrike** *Lanius cristatus* for the UAE was at Al Wathba camel track on 12 November. The first for Italy stayed at Tomina, Modena, northern Italy, from 1 December and it was not identified before being trapped in early January. A **Steppe Grey Shrike** *L pallidirostris* at Eilat, Israel, remained from 18 November through December. A **Pied Crow** *Corvus albus* was feeding on the beach and



42 Northern Hawk Owl / Sperweruil *Surnia ulula*, Bialowieza, Poland, 22 December 2002 *(Tomasz Kulakowski)*

43 Paddyfield Warbler / Veldrietzanger *Acrocephalus agricola*, Canal Vell, Ebro delta, Tarragona, Spain, 27 November 2002 *(Oriol Clarabuch)*

44 Raso Lark Razoleeuwerik *Alauda razae*, male, Raso, Cape Verde Islands, 7 March 2002 *(Leo J R Boon/Cursorius)*

in town at Puerto de la Aldea near San Nicolas on Gran Canaria, Canary Islands, on 24 December (its provenance is unknown but it may well have been the escaped bird on Fuerteventura in late 2000). In Tunisia, a few pairs of **Desert Sparrow** *Passer simplex* were regularly recorded at the Kebilia National Park and the Bir Soltane road in early December. In France, **Citril Finches** *Serinus citrinella* were seen well outside their usual range during December, eg, one at a garden in Loire-Atlantique for two weeks and another north of Paris at Royaumont, Val d'Oise, on 21 December. The c 15th **Two-barred Crossbill** *Loxia leucoptera* reported this autumn for the Netherlands was a male at Lage Mierde, Noord-Brabant, on 27-29 December. The male discovered at IJzeren Veld, Huizen, Noord-Holland, on 15 September was still present in January. A female was found at Sandringham, Norfolk, on 12 December. Five were reported from Germany during November and again five in December. In Denmark, 86 were listed for November alone and c 200 were still present in southern Norway in early January. In the Netherlands, rumours of an influx of Parrot Crossbill *L pytyopsittacus* appeared to be attributable to yet another vocal type (tentatively named type 'X') to be described for Common Crossbill *L curvirostra*. This type's flight calls appear to be nearly indiscernible, even by sonagrams, from a distinctive 'n'-shaped variant of Parrot Crossbill flight calls which was typical of birds involved in the 1990/91 invasion. The excitement call, however, is unlike that of Parrot Crossbill and closely resembles Common Crossbill vocal type A (cf Dutch Birding 22: 61-107, 2000). It may turn out that type 'X' should be included in type A (Magnus Robb in litt). Away from Toscana (with up to four), three **Pine Buntings** *Emberiza leucocephalos* were present at Magredi di Cordenons, north-eastern Italy, on 1 December. In central Italy, one was at Principina a Mare on 9 December. In France, two were found at the usual site in the Camargue in early January. In Sweden, one was at Kråkelund, Småland, from 4 January onwards. The first-winter **Bobolink** *Dolichonyx oryzivorus* at Hengistbury Head, Dorset, from 1 November was not seen after 23 November.

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Recente meldingen

Dit overzicht van recente meldingen van zeldzame en interessante vogels in Nederland en België beslaat voornamelijk de periode **november-december 2002**. De vermelde gevallen zijn merendeels niet geverifieerd en het overzicht is niet volledig. Alle vogelaars die de moeite namen om hun waarnemingen aan ons door te geven worden hartelijk bedankt.

Waarnemers van soorten in Nederland die worden beoordeeld door de Commissie Dwaalgasten Nederlandse Avifauna wordt verzocht hun waarnemingen zo spoedig mogelijk toe te zenden aan: CDNA, Postbus 45, 2080 AA Santpoort-Zuid, Nederland, e-mail cdna@dutchbirding.nl. Hiertoe gelieve men gebruik te maken van CDNA-waarnemingsformulieren die eveneens verkrijgbaar zijn bij bovenstaand adres, of via de website van de DBA op www.dutchbirding.nl.

Nederland

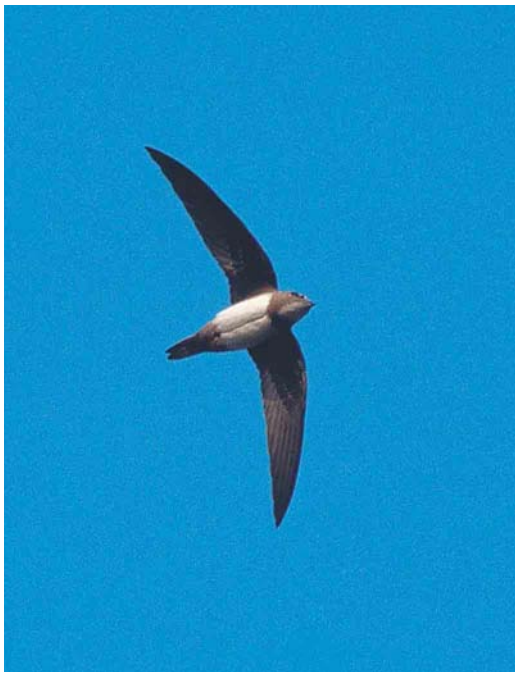
GANZEN TOT VALKEN Er werden 12 **Sneeuwganzen** *Anser caerulescens* doorgegeven, voornamelijk in het noorden van het land. Op 2 november werden drie **Ross' Ganzen** *A rossii* gemeld in de Scherpenissepolder op Tholen, Zeeland. Hierna volgde een normaler winterpatroon met de gehele periode ten minste twee her en der in de Delta. Op 25 en 26 december verbleef er één op het Kampereiland ten noorden van Kampen, Overijssel. Het grootste aantal **Dwergganzen** *A erythropus* werd gezien ten westen van Strijen, Zuid-Holland, met maximaal 34 vanaf 17 november. Op de Korendijkse Slikken, Zuid-Holland, verbleven er in die periode maximaal 10, mogelijk deels dezelfde. Verder werden er zeven elders in Nederland waargenomen. In totaal werden minimaal 18 **Roodhalsganzen** *Branta ruficollis* opgemerkt. Er werden 11 **Witbuikrotganzen** *B hrota* doorgegeven, waaronder een opmerkelijke binnenlandwaarneming op 6 november bij Polsmaten aan het Veluwemeer, Gelderland. Hier werden op die dag ook twee **Zwarte Rotganzen** *B nigricans* gemeld. Van laatstgenoemde soort werden op andere plaatsen nog 13 exemplaren waargenomen, waaronder een uitzonderlijke waarneming van een adulte van 23 november tot 8 december langs de Maas in het grensgebied ten zuiden van Grevenbicht, Limburg, in gezelschap van een onvolwassen Rotgans *B bernicla*. **Witoogeenden** *Aythya nyroca* verbleven van 3 tot 6 november op de Kaliwaal in de Millingerwaard, Gelderland, van 26 tot 29 november bij Noordwijkerhout, Zuid-Holland, vanaf 11 december maximaal twee bij Heel, Limburg, vanaf half november bij Uithuizen, Gronin-

45 IJseend / Long-tailed Duck *Clangula hyemalis*, mannetje, Medemblik, Noord-Holland, 17 november 2002 *(Jan Smit)*

[*Dutch Birding 25: 64-72, 2003*]

46 Koereiger / Cattle Egret *Bubulcus ibis*, Vlagtwedde, Groningen, 24 november 2002 *(Eric Koops)*

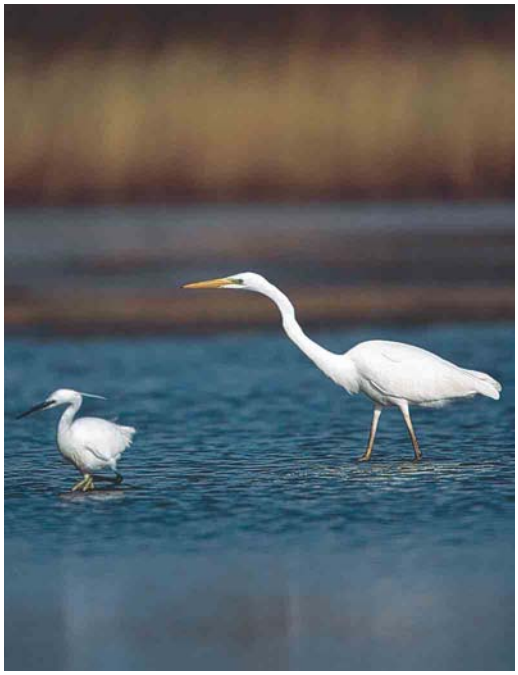
47 Kleine Alk / Little Auk *Alle alle*, Zierikzee, Zeeland, 29 november 2002 *(Bas de Bruijn)*



48 Alpengierzwaluw / Alpine Swift *Apus melba*, Wageningen, Gelderland, 17 november 2002 *(Eric Koops)*

gen, en op 18 december twee ten noorden van Eindhoven, Noord-Brabant. Er was een melding van een vrouwtje **Koningseider** *Somateria spectabilis* op 4 januari bij Vlissingen, Zeeland. Lang in het binnenland verblijvende **Parelduikers** *Gavia arctica* waren tot 9 november te zien bij Windesheim, Overijssel, en van 25 tot 31 december bij Sprang-Capelle, Noord-Brabant. Niet minder dan 12 **IJsduikers** *G immer* werden waargenomen, waaronder vier langstrekkend aan de kust en pleisterende van 2 november tot 2 december bij de Brouwersdam, Zuid-Holland, van 2 november tot 27 december ten oosten van Apeldoorn, Gelderland, en van 10 tot 26 december bij Zwolle, Overijssel. De laatste **Grauwe Pijlstormvogels** *Puffinus griseus* van het najaar vlogen op 7 november langs Westkapelle, Zeeland, en op 9 november langs Scheveningen, Zuid-Holland, en 10 langs Ameland, Friesland. Een uitzonderlijke waarneming betrof een late **Vale Pijlstormvogel** *P mauretanicus* op 8 december langs Langevelderslag, Zuid-Holland. Het **Wilsons Stormvogeltje** *Oceanites oceanicus* dat op 7 november langs Westkapelle vloog, betreft indien aanvaard de eerste voor Nederland. Tot 9 november werden ook nog vijf **Vale Stormvogeltjes** *Oceanodroma leucorhoa* gezien. Daarna werd er nog één dood gevonden op 19 december op het strand bij Vlissingen. Slechts een 10-tal waarnemingen van **Kuifaalscholvers** *Stictocarbo aristotelis* sijpelde door. De **Koereiger** *Bubulcus ibis* van de Prunjepolder, Zeeland, hield het vol tot 7 december. Andere verbleven van 9 tot 11 november ten zuidwesten van Kampen, van 18 november tot 8 december twee bij Doornspijk, Gelderland, en van 23 tot 27 november één bij Vlagtwedde, Groningen. **Kleine Zilverreigers** *Egretta garzetta* waren beduidend schaarser dan de vorige periode. Alleen in de Delta verbleven nog grote aantallen, met bijvoorbeeld op 10 december 43 rond het Veerse Meer, Zeeland, en op 11 december 12, waarvan twee overleden, op Dwars in de Weg in de Grevelingen, Zeeland. Ook werden 10-tallen **Grote Zilverreigers** *Casmerodius albus* gezien, met 10 of meer op de volgende locaties: in de Oostvaardersplassen, Flevoland, in de polders bij Mijdrecht, Utrecht, en in de polders ten noorden van Nuland, Noord-Brabant. Naast de eeuwig aanwezige **Zwarte Ibis** *Plegadis falcinellus* langs de Belkmerweg in Noord-Holland, waren er waarnemingen op 14 november bij Moergestel, Noord-Brabant, en op 6 december bij Nieuw Vennep, Noord-Holland. Uitzonderlijk was de melding van een **Zwarte Wouw** *Milvus migrans* op 31 december in de Wieringermeer, Noord-Holland. Vanaf eind november werd een 11-tal **Rode Wouwen** *M milvus* gezien. Er werden 11 **Zeearenden** *Haliaeetus albicilla* gezien, waaronder tweetallen op 23 november in de Oostvaardersplassen en op 31 december op de Korendijkse Slikken en een adulte van 5 tot 11 december rond het Drontermeer,

49 Grote Zilverreiger / Great Egret *Casmerodius albus* en Kleine Zilverreiger / Little Egret *Egretta garzetta*, Oostvoornse Meer, Zuid-Holland, 11 november 2002 *(Jan van Holten)*



Gelderland. Na lange tijd dook op 5 december de **Bastaardarend** *Aquila clanga* van de Oostvaardersplassen weer op. Volgens informatie van Staatsbosbeheer werd deze vogel daar ook eind december nog gezien. Op 4 januari werd een onvolwassen exemplaar waargenomen op de Slikken van Flakkee, Zuid-Holland. Een zeer late **Roodpootvalk** *Falco vespertinus* werd op 3 november gemeld bij Nijkerk, Gelderland.

KRAANVOGELS TOT ALKEN C 500 **Kraanvogels** *Grus grus* werden in november gezien, met als beste datums 6, 19 en 20 november. In december werden nog enkele losse pleisterende vogels opgemerkt. Een juveniele geringde **Steltkluut** *Himantopus himantopus* verbleef van 2 tot 4 november in de Speketerspolder bij Dirkshorn, Noord-Holland. Een hoog winteraantal van 173 **Zwarte Ruiters** *Tringa erythropus* werd geteld op 12 december bij het Goessche Sas, Zeeland. De **Kleine Geelpootruiter** *T flavipes* van het Amstelmeer, Noord-Holland, bleef tot 3 november. Een **Grauwe Franjepoot** *Phalaropus lobatus* werd opgemerkt op 6 november bij Egmond aan Zee, Noord-Holland. In november werden 15 **Rosse Franjepoten** *P fulicarius* waargenomen, waaronder één op 9 november in de Brabantse Biesbosch, Noord-Brabant; in december was er slechts één. Een leuk dagtotaal van **Dwergmeeuwen** *Larus minutus* was 1634 op 4 november langs Westkapelle. Op deze locatie werden op 7, 8 en 9 november ook nog eens in totaal vijf **Vorkstaartmeeuwen** *L sabini* geteld. De **Ringsnavelmeeuw** *L delawarensis* van Goes, Zeeland, werd met grote tussenpozen gedurende de gehele periode gezien. Een **Kleine Burgemeester** *L glaucoides* werd op 28 december gemeld aan de westkant van Amsterdam, Noord-Holland. Naast de bekende adulte **Grote Burgemeester** *L hyperboreus* van Den Helder, Noord-Holland, werd een vliegend onvolwassen exemplaar op 21 november gemeld in Haarlem, Noord-Holland. Er werden slechts 16 **Kleine Alken** *Alle alle* geteld. **Papegaaiduikers** *Fratercula arctica* vlogen op 6 en 7 november langs Westkapelle en op deze dagen ook twee respectievelijk één langs Camperduin, Noord-Holland, en op 9 november langs Ameland.

51 Geelpootmeeuw / Yellow-legged Gull *Larus michahellis*, Brouwersdam, Zeeland, 9 november 2002 *(Rob van Bemmelen)*

DUIVEN TOT GORZEN Een late **Zomertortel** *Streptopelia turtur* verbleef van begin tot 29 december in Julianadorp, Noord-Holland, en een late **Gierzwaluw** *Apus apus* vloog op 24 november boven de AW-duinen, Noord-Holland. Buitenissig was de lang verblijvende **Alpengierzwaluw** *A melba* in Wageningen, Gelderland. Van 8 november tot 4 december was de vogel te zien, foeragerend boven de stad of slapend in een fabrieks-

50 IJsduiker / Great Northern Loon *Gavia immer*, juveniel, Apeldoorn, Gelderland, 31 november 2002 *(Mark Zekhuis)*

52 Rosse Franjepoot / Red Phalarope *Phalaropus fulicarius*, met Drieteenstrandlopers / Sanderlings *Calidris alba*, Katwijk aan Zee, Zuid-Holland, 27 oktober 2002 *(René van Rossum)*

53 Zomertortel / European Turtle Dove *Streptopelia turtur*, Julianadorp, Noord-Holland, 9 december 2002 *(René Pop)*

54 Kleine Geelpootruiter / Lesser Yellowlegs *Tringa flavipes*, juveniel, Amstelmeerdijk, Noord-Holland, 30 oktober 2002 *(Phil Koken)*

55 Witbandkruisbek / Two-barred Crossbill *Loxia leucoptera bifasciata*, vrouwtje, Zeven Linden, Baarn, Utrecht, 23 november 2002 *(Phil Koken)*

56 Zwartkeellijster / Black-throated Thrush *Turdus ruficollis atrogularis*, Harlingen, Friesland, 25 december 2002 *(Jan den Hertog)*

gebouw in de haven van Wageningen. Op de laatste dag werd de vogel in verzwakte toestand gevangen op zijn slaapplaats. Tot ten minste januari bevond de vogel zich in gevangenschap en leek het naar omstandigheden goed te maken. Zeer late **Roodstuitzwaluwen** *Hirundo daurica* vlogen op 22 november bij Vlissingen en op 24 november bij Scheveningen. Tot 15 november werden nog vijf **Grote Piepers** *Anthus richardi* gezien. Op 9 december werd er één gevangen op de vinkenbaan in de Kennemerduinen te Bloemendaal, Noord-Holland. Naast een waarneming van een **Mongoolse Pieper** *A godlewskii* op 12 november op Texel, Noord-Holland, was er een vangst op 24 november te Bloemendaal. Indien aanvaard zijn dit de derde en vierde voor Nederland. Een late **Roodkeelpieper** *A cervinus* vloog op 10 november over Westenschouwen, Zeeland. Een voorzichtig begin van een invasie van **Pestvogels** *Bombycilla garrulus* tekende zich af met 22 verspreid over de periode. **Waterspreeuwen** *Cinclus cinclus* werden op 8 november bij De Haukes, Noord-Holland, en op 17 december in het Amsterdamse Bos, Noord-Holland, opgemerkt. Vanaf 15 december verbleef de zesde **Zwartkeellijster** *Turdus ruficollis atrogularis* voor Nederland in een niet-toegankelijke tuin in Harlingen, Friesland. Vanaf 21 december kon dit eerste-winter mannetje bij tijd en wijle ook buiten deze tuin worden aangetroffen maar na 25 december was hij verdwenen. **Cetti's Zangers** *Cettia cetti* lijken met een opmars bezig. In deze periode waren er waarnemingen van 2 november tot 3 december bij het Oostvoornse Meer, Zuid-Holland, op 23 november bij 's-Gravenzande, Zuid-Holland, en in het Markiezaat bij Bergen op Zoom, Noord-Brabant, op 28 november in de Aalkeetbuitenpolder, Zuid-Holland, en op 24 december twee bij de Molenplaat, wederom bij Bergen op Zoom. Een uitzonderlijke melding van een **Graszanger** *Cisticola juncidis* kwam op 23 december van de Eemshaven, Groningen. Een **Pallas' Boszanger** *Phylloscopus proregulus* werd op 29 november gemeld bij Haren, Groningen. **Bladkoningen** *P inornatus* verschenen op 2 november in Wijnandsrade, Limburg, en Schiedam, Zuid-Holland, en op 25 november op Texel. Een **Bruine Boszanger** *P fuscatus* bezocht op 10 november Ameland. **Siberische Tjiftjaffen** *P collybita tristis* werden op 2 en 3 november gemeld bij het Oostvoornse Meer, op 15 november ten noorden van Emmen, Drenthe, op 16 november in de Makkumerzuidwaard, Friesland, op 20 november bij Zuidhorn, Groningen, en vanaf 30 december in Hoogkerk, Groningen. Een **Kleine Vliegenvanger** *Ficedula parva* verbleef op 1 november op Texel. Een groep van 25 **Witkopstaartmezen** *Aegithalos caudatus caudatus* werd op 17 november waargenomen bij Voorschoten, Zuid-Holland. **Taigaboomkruipers** *Certhia familiaris* werden op 1 november gemeld in Groningen, Groningen, op 3 november bij Amerongen, Gelderland, en op 7 december in Hengelo, Overijssel. Twee **Buidelmezen** *Remiz pendulinus* waren op 13 december nog present bij Ooltgensplaat, Zuid-Holland. Erg laat waren de **Grauwe Klauwieren** *Lanius collurio* op 2 november op Texel en op 23 november in de duinen bij Heemskerk, Noord-Holland. Een pleisterende **Raaf** *Corvus cora*x die op 29 december werd gefotografeerd in de Eemshaven was ver van huis. In het IJzeren Veld bij Huizen, Noord-Holland, verbleef de gehele periode een mannetje **Witbandkruisbek** *Loxia leucoptera* en op 20 november werd hier ook een vrouwtje opgemerkt. Verder werd de soort op 16 november gezien in de Loenermark, Gelderland (vrouwtje), van 23 november tot 14 december onregelmatig bij Baarn, Utrecht (vrouwtje), op 23 november bij Sellingen, Groningen (mannetje en vrouwtje) en van 27 tot 29 december bij Lage Mierde, Noord-Brabant (mannetje); de laatste vogel zorgde door de relatief smalle vleugelbanden voor enige discussie. Voorts werden exemplaren gehoord op 3 november in het Kuinderbos, Flevoland, op 20 november bij Steenwijk, Overijssel, en op 21 november op de Duurswouder Heide, Friesland. In november werden op enkele plaatsen overvliegende **Grote Kruisbekken** *L pytyopsittacus* gemeld. De identiteit van al deze vogels blijft vooralsnog ongewis door de aanwezigheid van **Kruisbekken** *L curvirostra* met vocale karakteristieken van hun grote broer. Een **Dwerggors** *Emberiza pusilla* was op 5 december kort ter plaatse bij Petten, Noord-Holland. Een groep van maximaal 21 **Grauwe Gorzen** *Emberiza calandra* verbleef vanaf 12 november in het hamsterreservaat bij Sibbe, Limburg.

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België

ZWANEN TOT REIGERS Er waren meer meldingen van **Kleine Zwanen** *Cygnus bewickii* dan normaal: de waarnemingen kwamen van Blokkersdijk, Antwerpen; Dilsen-Stokkem, Limburg; Harelbeke, West-Vlaanderen; Heppeneert, Limburg; Maaseik, Limburg; Neerijse, Vlaams-Brabant; Roksem, West-Vlaanderen; Torhout, West-Vlaanderen; en Watervliet, Oost-Vlaanderen. Het maximum van 188 werd geteld te Waterland-Oudeman, Oost-Vlaanderen, op 5 december. Telkens twee adulte **Wilde Zwanen** *C cygnus* verbleven te Sint-Agatha-Rode, Vlaams-Brabant; Schulen, Limburg; en bij Westmalle, Antwerpen; en één exemplaar werd waargenomen bij Heppeneert. **Taigarietganzen** *Anser fabalis* waren zeldzaam met waarnemingen te Heppeneert op 14 december (drie) en Boekhoute, Oost-Vlaanderen, op 26 december (twee). Een Finse **Dwerggans** *A erythropus* (met halsband) liep op 23 december in de Uitkerkse Polders, West-Vlaanderen.

Op 27 en 28 december verbleef daar een niet gemerkte, dus andere adulte vogel. Van 24 tot ten minste 27 november vertoefden weer drie adulte **Ross' Ganzen** *A rossii* in de Achterhaven van Zeebrugge, West-Vlaanderen, maar ook nu weer kreeg niemand het daar echt warm van. De adulte **Zwarte Rotgans** *Branta nigricans* die in Noord-Limburg, Nederland, verbleef, stak (vanaf 23 november) regelmatig de grens over te Heppeneert en was tot na de jaarwisseling aanwezig. Het gaat hier om het tweede geval voor België. Op 27 december werd bij Roly, Namur, een **Roodhalsgans** *B ruficollis* waargenomen. De herkomst is niet bekend. Op 12 november zwom er doodleuk een **Zomertaling** *Anas querquedula* rond te Kluizen, Oost-Vlaanderen. Er werden in totaal 16 **Krooneenden** *Netta rufina* gemeld. Het klassieke mannetje **Ringsnaveleend** *Aythya collaris* bleef trouw aan Blokkersdijk maar dook ook nu weer enkele malen elders in de Antwerpse Haven, Antwerpen, op. Een mannetje **Witoogeend** *A nyroca* dat op 1 november te Dilsen-Stokkem werd gezien, zwom van 5 tot 19 november rond te Zonhoven, Limburg; van 29 november tot 13 december verbleef een mannetje te Wintam (Bornem), Antwerpen; op 6 december een vrouwtje te Waasmunster, Oost-Vlaanderen; op 7 december een vrouwtje te Diepenbeek, Limburg; op 18 december een mannetje te Lier, Antwerpen (vanaf 20 december verbleef deze vogel te Duffel, Antwerpen); en van 24 tot 27 december een mannetje op de Blaarmeersen te Gent, Oost-Vlaanderen. Langs Blankenberge, West-Vlaanderen, trokken op 3 november 11 **IJseenden** *Clangula hyemalis* en op 30 november vlogen er zes langs Oostende, West-Vlaanderen. In het binnenland waren er waarnemingen van **Grote Zee-eenden** *Melanitta fusca* te Hombeek, Vlaams-Brabant, op 8 december (drie) en te Dilsen op 28 december (twee). Op 1 november werd een **Roodkeelduiker** *Gavia stellata* gezien te Lier en van 23 november tot 14 december verbleef er één te Duffel. Langs de kust werden slechts drie **Parelduikers** *G arctica* gezien. In het binnenland waren er waarnemingen te Schulen op 11 en 12 december; op de Barrage de l'Eau d'Heure, Hainaut, op 19 december; en bij Nazareth, Oost-Vlaanderen, op 27 en 28 december. Juveniele **IJsduikers** *G immer* lieten zich bekijken op De Gavers te Harelbeke, West-Vlaanderen, van 15 november tot ten minste 18 december; en op de Spuikom te Oostende van 23 november tot ten minste 28 december. Het aantal **Roodhalsfuten** *Podiceps grisegena* te Harelbeke nam toe tot drie; ook waren er twee aanwezig te Nazareth en één te Hofstade, Vlaams-Brabant. Er werden 11 **Kuifduikers** *P auritus* gemeld. Van 30 november tot 26 december pleisterde een juveniele **Kuifaalscholver** *Stictocarbo aristotelis* te Walem, Antwerpen. Er werden opvallend meer **Roerdompen** *Botaurus stellaris* gezien dan tijdens andere winters: vele relatief kleine rietkragen herbergden meerdere vogels maar de grootste concentratie was te vinden op De Gavers te Harelbeke met zeven exemplaren. **Kleine Zilverreigers** *Egretta garzetta* verbleven te Beveren, Oost-Vlaanderen; Bredene, West-Vlaanderen; Dudzele-Lissewege-Zeebrugge (maximaal 37 op 2 november); Gent; Knokke, West-Vlaanderen (maximaal 38 op 30 november); en bij Verrebroek, Oost-Vlaanderen. Op 8 december vloog een **Ooievaar** *Ciconia ciconia* over De Kuifeend bij Antwerpen en van 11 tot eind december verbleef een groep van 11 op het stort te Moen, West-Vlaanderen. **Grote Zilverreigers** *Casmerodius albus* werden waargenomen op Blokkersdijk; te Boutersem, Vlaams-Brabant; Bree, Limburg; bij Bornem (15); te Geel, Antwerpen; Genk, Limburg; bij Gent; te Gierle, Antwerpen; Knokke (14); Mechelen, Antwerpen (14); Merelbeke, Oost-Vlaanderen; Moerbeke, Oost-Vlaanderen; Nazareth; Neerijse (twee); Pulle, Antwerpen; Rochefort, Namur; Rosières, Luxembourg; Schulen (tot 11); Sint-Agatha-Rode; Virelles, Hainaut; Zolder, Limburg (maximaal acht); en te Zonhoven, Limburg (maximaal 31 op 24 november!).

57 Zwarte Rotgans / Black Brant *Branta nigricans*, adult, met Kleine Zwaan / Bewick's Swan *Cygnus bewickii*, Heppeneert, Limburg, 25 december 2002 *(Wim Heylen)*

WOUWEN TOT STERNS **Rode Wouwen** *Milvus milvus* trokken over Zeebrugge op 22 november; over Brecht, Antwerpen, op 8 en op 31 december; over Heist, West-Vlaanderen, op 19 december; en over Kessel-Lo, Vlaams-Brabant, op 24 december. Voor het eerst in meer dan 10 jaar verbleef eindelijk eens een twitchbare **Ruigpootbuizerd** *Buteo lagopus* in België: een juveniel pleisterde vanaf 25 december bij Beveren. Verrassend was de late vondst van een dode maar verse, juveniele **Kwartelkoning** *Crex crex* bij De Panne, West-Vlaanderen, op 30 november. Op 3 november vlogen 18 **Kraanvogels** *Grus grus* over Malmédy, Liège, en vier over Mol, Antwerpen. Op 5 november trokken er 23 over Gent en op 15 november 15 à 20 over Tessenderlo, Limburg. Op 19 november waren er verschillende auditieve waarnemingen over Leuven, Vlaams-Brabant. Tijdens de trekpiek op 20 november vlogen Kraanvogels over Andenne, Namur (15); Gent (auditief); Hasselt (zeven); Heverlee, Vlaams-Brabant (100+); Leuven (auditief); Schulen (180); Sint-Joris-

58 Pallas' Boszanger / Pallas's Leaf Warbler *Phylloscopus proregulus*, Zeebrugge, West-Vlaanderen, 5 november 2002 *(Johan Buckens)*

Weert, Vlaams-Brabant (43); Sint-Truiden, Limburg (150); Temse, Oost-Vlaanderen (28). Op 21 november vlogen er 22 over Brecht en op 21 en 22 november pleisterden er twee te Merelbeke, Oost-Vlaanderen. Daarna werd het iets rustiger, met waarnemingen te Bredene op 22 november (28); te Ovifat, Liège, op 8 december (150); en te Hingelen, Limburg, op 23 december (vijf). Ten slotte pleisterde vanaf 26 december één vogel bij Beveren. In Het Zwin te Knokke werd nog een **Kleine Strandloper** *Calidris minuta* gezien op 26 november. De eerste-winter **Rosse Franjepoot** *Phalaropus fulicarius* bleef nog tot 2 november aanwezig te Blankenberge, West-Vlaanderen, en op 4 november vloog er één langs Oostende. Daar vloog op 22 en 30 november ook een **Grote Jager** *Stercorarius skua* langs. Er werden in totaal zes **Zwartkopmeeuwen** *Larus melanocephalus* gezien, een normaal aantal voor de wintermaanden. Naast de klassieke spreiding van **Pontische Meeuwen** *L cachinnans* was er een telling van 13 te Dilsen-Stokkem op 25 december. De adulte **Grote Burgemeester** *L hyperboreus* vertoefde nog tot na de jaarwisseling in de haven van Oostende. Een **Visdief** *Sterna hirundo* bleef tot 16 november aanwezig in de Zeebrugse Haven. Op 1 november foerageerde daar nog een **Zwarte Stern** *Chlidonias niger*.

UILEN TOT GORZEN Er werden 14 **Velduilen** *Asio flammeus* opgemerkt waarvan vier in Het Zwin. Op 13 december werd een **Hop** *Upupa epops* gezien bij Lommel, Antwerpen. Over Bredene vloog op 23 november een late **Boerenzwaluw** *Hirundo rustica*. Op 1 november was een **Rouwkwikstaart** *Motacilla yarrellii* aanwezig te Nieuwpoort, West-Vlaanderen, en op 23 november werden er twee gezien te Oostende. **Cetti's Zangers** *Cettia cetti* bleven tijdens deze periode aanwezig te De Panne; Harchies, Hainaut (10); Harelbeke; Raversijde, West-Vlaanderen; Stuivekenskerke, West-Vlaanderen (drie); Zandvoorde, West-Vlaanderen; en Zeebrugge. **Graszangers** *Cisticola juncidis* wisten zich te handhaven in de Achterhaven van Zeebrugge (vier tot 24 november) en in de Voorhaven van Zeebrugge (tot 3 december). Bij Middelkerke, West-Vlaanderen, werd op 1 november nog een **Braamsluiper** *Sylvia curruca* opgemerkt. Een **Pallas' Boszanger** *Phylloscopus proregulus* liet zich op 5 november goed bekijken te Zeebrugge en vormde zowat het hoogtepunt van het najaar...! Een late **Fitis** *P trochilus* werd op 16 november waargenomen te Heist. Op 4 november werd een **Buidelmees** *Remiz pendulinus* opgemerkt te Antwerpen-Linkeroever, Antwerpen. Er werden **Klapeksters** *Lanius excubitor* gezien op het Schietveld te Brecht (vier); te Diepenbeek; te Doel, Oost-Vlaanderen; te Genk-Bokrijk; bij Kalmthout, Antwerpen (twee); te Neerijse; Oud-Heverlee, Vlaams-Brabant; bij Rijkevorsel, Antwerpen; en bij Testelt, Vlaams-Brabant. Maximaal drie **Bonte Kraaien** *Corvus cornix* verbleven in Het Zwin op 29 november en de soort zet daarmee zijn negatieve tendens voort. **Fraters** *Carduelis flavirostris* werden opgemerkt te Dilsen-Stokkem (zeven); Nieuwpoort; en Zeebrugge-Heist (30 tot 40), waarmee de aantallen voor deze soort hoger liggen dan in een gemiddelde winter. Op 17 november werden zeven **Grote Kruisbekken** *Loxia pytyopsittacus* herkend te Schoten, Antwerpen, en op 13 december meerdere exemplaren bij Leopoldsburg, Limburg. **IJsgorzen** *Calcarius lapponicus* werden gezien te Lier op 23 december; te Oostduinkerke, West-Vlaanderen (twee) op 1 november; te Oostmalle, Antwerpen, op 3 november; en te Zeebrugge op 21 november. Er werden **Sneeuwgorzen** *Plectrophenax nivalis* gezien te Brecht op 17 december; te Heist (acht) op 21 december; en te Kessenich, Limburg, op 25 december.

Deze waarnemingsrubriek kwam tot stand met medewerking van Luc Bekaert (Oost-Vlaanderen), Peter Collaerts (Vlaams-Brabant), Frank De Scheemaeker (Mergus), Koen Leysen (Limburg) en Willy Verschueren (Groenlink). Ook de hulp van al diegenen die (hun) waarnemingen inspraken op de Natuurpunt-vogellijn was hier onontbeerlijk. De Natuurpunt-vogellijn wordt thans beheerd door Ken Lossy. Het vogelnieuws is nu te raadplegen via het telefoonnummer 015-330194.

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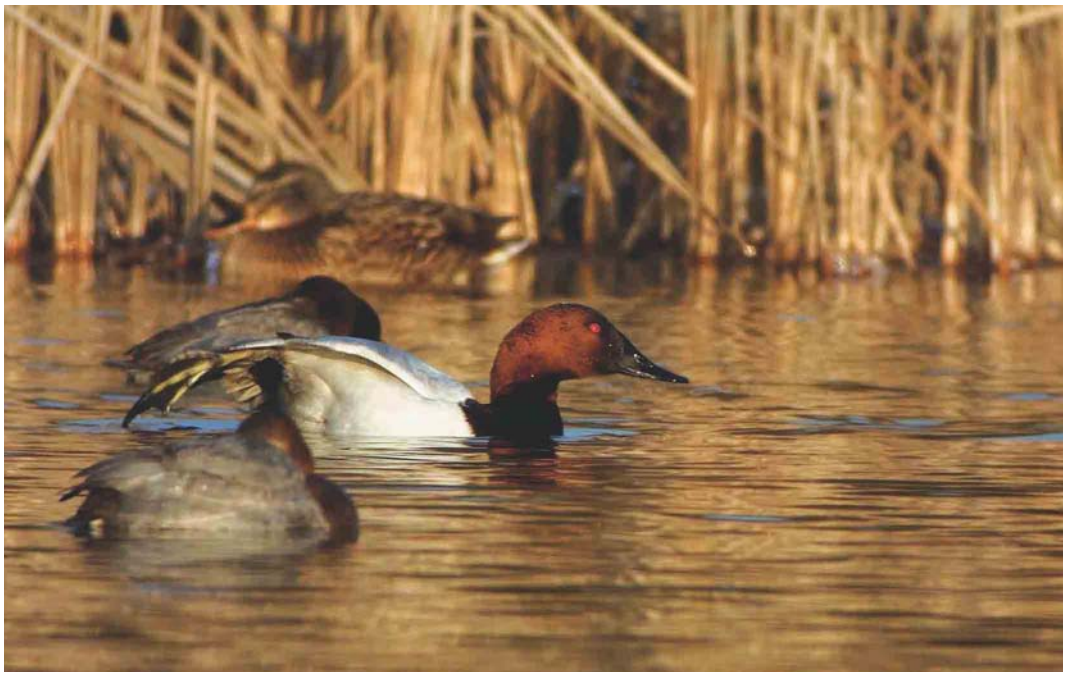
DB Actueel

Zwartkeellijster in Harlingen Op zondag 15 december 2002 zag Piet de Bruin in zijn achtertuin aan de Zuiderstraat in Harlingen, Friesland, een hem vreemd voorkomende lijster *Turdus*, die hij na raadpleging van een vogelgids op naam kon brengen als Zwartkeellijster *T ruficollis atrogularis*. Ook de volgende dagen zag PdB de vogel regelmatig in zijn tuin, wat hem er uiteindelijk toe bewoog zijn waarneming bekend te maken bij Radio Fryslân. Aanvankelijk werd gedacht dat de vogel niet kon worden waargenomen buiten het rijtje afgesloten achtertuinen van de Zuiderstraat, gelegen in een klein woonbuurtje aan de haven. Uit vrees voor overlast bij de omwonenden werd daarom in overleg met de beheerder van de Dutch Birding-vogellijn besloten om de exacte locatie geheim te houden; slechts enkele Friese vogelaars kregen toestemming om de tuin te bezoeken en konden de determinatie bevestigen. Vanaf 21 december werd de vogel echter ook regelmatig op andere plekken in de omgeving van de Zuiderstraat gezien, waarna werd besloten alle informatie vrij te geven zodat geïnteresseerden de vogel konden gaan bezoeken. Een vanaf de straat goed zichtbare tuin aan de c 150 m van de Zuiderstraat gelegen Dwarsstraat bleek de meest betrouwbare plek om de vogel vanaf de openbare weg waar te nemen. Met dank aan de bewoonster die regelmatig stukjes appel in haar tuin gooide, kon de vogel hier vaak langdurig en van dichtbij bekeken worden. Tot en met 25 december liet de lijster zich hier en op het rommelige binnenterrein achter de Zuiderstraat, eveneens 'gelokt' door stukjes appel, verschillende keren per dag zien. Vanaf 26 december was ondanks vrijwel onveranderde weersomstandigheden ineens geen spoor meer van de vogel te ontdekken. De kans bestaat dat de vogel als kerstmaal voor één van de vele katten in de buurt heeft gediend...

Het betrof een eerste-winter mannetje, gezien de vlekkerige keel en borst, met redelijk veel wit aan de toppen van de veren. Een adult mannetje in winterkleed heeft meestal een donkerdere borst en keel, met minder wit aan de toppen. De onderdelen van een adult mannetje zijn vrijwel egaal grijswit van kleur, terwijl de vogel van Harlingen behoorlijk gestreept was op de buik en flank. Verder vertoonde de vogel contrast tussen enkele geruide binnenste grote dekveren (egaal gekleurd) en zeven tot acht ongeruide buitenste grote dekveren (met opvallende witachtige zoom en top); ook de witachtige toppen op de tertials wijzen op een eerste-winter. De wang en hals waren, net als de rest van de kop, uniform bruingrijs, zonder lichte

59 Zwartkeellijster / Black-throated Thrush *Turdus ruficollis atrogularis*, Harlingen, Friesland, 24 december 2002
(Marten van Dijl)



60 Grote Tafeleend / Canvasback *Aythya valisineria*, mannetje, Castricum, Noord-Holland, 9 januari 2003
(Phil Koken)

61 Grote Tafeleend / Canvasback *Aythya valisineria*, mannetje, Castricum, Noord-Holland, 10 januari 2003
(Leo J R Boon/Cursorius)

wenkbrauwstreep als bij een onvolwassen vrouwtje. De vogel vertoonde alleen duidelijk geel op de basis van de ondersnavel; de bovensnavel en het einde van de ondersnavel waren donker, zwartachtig. Op de buitenste staartpennen was een duidelijke roodbruine tint zichtbaar evenals in de randen van de vleugelveren; dit kan duiden op enige genetische invloed van Roodkeellijster *T r ruficollis*.

De vogel in Harlingen betreft het zesde geval voor Nederland, en het vierde sinds de eerste twitchbare in 1996. Opvallend is dat alle betrekking hebben op waarnemingen in de noordelijke provincies: in Groningen, Groningen, in maart-april 1981, op Schiermonnikoog, Friesland, in oktober 1982, in Den Helder, Noord-Holland, in januari-maart 1996, op Terschelling, Friesland, in april 1998 en (wederom) in Groningen, Groningen, in november 2000. MARTEN VAN DIJL

BLACK-THROATED THRUSH From 15 to 25 December 2002, a first-winter male Black-throated Thrush *Turdus ruficollis atrogularis* was seen at Harlingen, Friesland, the Netherlands. A hint of red in the outer tail-feathers and wing possibly indicated some genetic influence from Red-throated Thrush *T r ruficollis*. If accepted, this is the sixth record for the Netherlands.

Grote Tafeleend bij Castricum Op donderdag 9 januari 2003 besloot ik 's middags nog even naar het infiltratiegebied in de duinen bij Castricum, Noord-Holland, te fietsen. Het vroor al een paar dagen en het meeste open water was dichtgevroren. In het gebied was het kanaal langs het doorgaande noord-zuidpad zoals altijd nog wel open. Het is er dan leuk vogelen met kans op soorten als Wilde Zwaan *Cygnus cygnus*, Roerdomp *Botaurus stellaris* en Waterral *Rallus aquaticus*.

Omdat het heerlijk zonnig weer was met weinig wind had ik mijn vrouw Tineke voorgesteld mee te gaan, naar later bleek een gouden zet! Het Hoefijzermeer was helemaal bevroren maar verderop hoorden en zagen we al Wilde Zwanen vliegen. Bij het eerste stuk open water liep een Roerdomp langs de kant en iets verder stond een tweede geheel vrij in het zonnetje. In het kanaal zwommen veel eenden, die goed te bekijken waren. Ik begon Tineke soorten als Grote Zaagbek *Mergus merganser* en Wintertaling *Anas crecca* aan te wijzen en op een gegeven moment hadden we zelfs een mannetje Krooneend *Netta rufina* in beeld. We fietsten weer wat verder om rond 14:30 opnieuw te stoppen aan het begin van de weg naar het Stille Strand. Er zwommen voornamelijk Wilde Eenden *A platyrhynchos* en als ik alleen was geweest was ik hoogstwaarschijnlijk doorgefietst. Een mannetje Slobeend *A clypeata* liet zich mooi bekijken en Tineke vond een vrouwtje Tafeleend *Aythya ferina*. Het leek me nu het juiste moment om haar een mannetje Tafeleend te laten zien, dus ik zocht verder in de groep en kreeg er al snel een in beeld. Ik wilde net gaan uitleggen waar hij zwom toen het tot me doordrong dat de vogel zo'n lange donkere snavel had en dat de kopvorm niet klopte voor een gewone Tafeleend. Alarmbellen begonnen te rinkelen en voor vergelijking ging ik snel op zoek naar een ander mannetje Tafeleend. Gelukkig bleek er een vlakbij te zwemmen en die zag er heel anders uit. Toen begon het tot me door te dringen dat het een 'Canvasback' *A valisineria* moest zijn. Ik had op dat moment geen flauw idee wat de Nederlandse naam was. Ik probeerde Tineke zo rustig mogelijk duidelijk te maken dat we naar een nieuwe soort voor Nederland stonden te kijken, maar later vertelde zij me dat ik op dat moment steeds luider begon te praten. Ik deelde haar mee dat de soort in Engeland zonder problemen aanvaard was en dat het doorgeven van deze vogel veel vogelaars op de been zou brengen.

Als verschillen met Tafeleend noteerden we de opvallend lange donkere snavel met concaaf culmen, het rechte en vlakke donkere voorhoofd, de minder roodbruine kleur van de kop en de lichtere flanken. Ook viel op dat de vogel iets groter en forser was. Je begint toch aan jezelf te twijfelen en ik vroeg Tineke dan ook herhaaldelijk of zij de door mij genoemde verschillen ook zag. Ik kreeg echter steeds een keiharde bevestiging. De vogel zwom gelukkig mooi dichtbij en aldoor met de kop uit de veren. Eenmaal sloeg hij de vleugels uit en die leken gaaf. Verder had ik al vastgesteld dat een poot ongeringd was maar later kon ik me niet meer herinneren welke poot dat was.

Omdat ik er zeker van wilde zijn dat het geen hybride was en omdat ik geen mobiele telefoon bij me had, besloten we om zo snel mogelijk naar huis te fietsen. Thuis bleken alle kenmerken te kloppen: dus als 'zeker' doorpiepen en weer terug naar de plek. Dat laatste bleek niet zo eenvoudig want vanaf het moment dat ik het huis uitliep werd ik steeds gebeld. Uiteindelijk bereikte ik toch weer de plek en zag de vogel al met het blote oog zwemmen. Dat betekende meteen weer doorpiepen en daarna wachten. Ondertussen was de vogel gaan slapen en toen de eerste vogelaars arriveerden was er niet echt veel aan te zien. Sander Lagerveld wist te vertellen dat er ook een verschil was bij de begrenzing tussen zwart en grijs. Bij Grote Tafeleend (want dat bleek de Nederlandse naam) reikt de grens tussen lichte flank en de zwarte borst verder naar voren dan bij Tafeleend. Ook in dit geval bleek dat perfect te kloppen. Gelukkig werd hij in de schemering weer actiever en begon toen druk te duiken, met als gevolg dat de snavel en de kopvorm er weer uitknalden.

De volgende dag werd de vogel al voor het ochtendgloren weer gezien en dankzij langdurig observeren en filmwerk van onder anderen Leo Boon werd die ochtend vastgesteld dat beide poten ongeringd waren. Hij was de hele dag en het weekend erna steeds op dezelfde plek aanwezig en vanaf het pad uitstekend te bekijken. Tot ten minste 18 januari was hij ook op het inmiddels weer ijsvrije Hoefijzermeer te zien. Het enige minpunt was dat hij overdag veel met de kop in de veren zwom. Geregeld moest er dus lang gewacht worden om de vogel in vol ornaat te zien te krijgen. Gelukkig zorgden het fraaie winterse duinlandschap en de aanwezigheid van soorten als Roerdomp, Waterral,

Pestvogel *Bombycilla garrulus* (twee keer overtrekkend) en Klapekster *Lanius excubitor* voor de nodige afleiding; alles bij elkaar een ideale situatie voor een perfecte 'twitch'.

Indien aanvaard betekent deze waarneming een nieuwe soort voor Nederland en de eerste voor het vasteland van Europa. Naast een vrouwtje verzameld in IJsland op 11 april 1977 en een vrouwtje in Orkney, Schotland, in juni 2000 (nog in behandeling) zijn er sinds 1997 c vijf mannetjes vastgesteld in Engeland, waar zowel in Essex als in Kent een mannetje verbleef in de winters van 1998/99, 1999/2000 en 2000/01. In de winters van 2001/02 en, tot nu toe, 2002/03 bleven ze echter weg. Er werd daarom al gespeculeerd dat ze met Tafeleenden naar het vasteland van West-Europa waren getrokken (Richard Millington in litt). Grote Tafeleend broedt in Noord-Amerika en de halve populatie overwintert nabij de Atlantische trekroute met de grootste aantallen bij Chesapeake Bay aan de oostkust van de VS. In 1996 bleek dat de populatie in de vier jaar sinds 1992 verdubbeld was. Net als alle eenden wordt ook deze soort in gevangenschap gehouden, maar slechts in beperkte mate en voor zover bekend nog zonder broedsucces. COCK REIJNDERS

CANVASBACK On 9 January 2003, an unringed male Canvasback *Aythya valisineria* was discovered near Castricum, Noord-Holland, where it was present until at least 18 January. If accepted, this is the first record for the Netherlands and about the seventh for Europe.

New species of parrot The parrot genus *Pionopsitta* is considered to comprise of seven (or eight by some authors) species which have an allopatric distribution in Central and South America. Three species occur in the Amazon basin and one of these, Vulturine Parrot *P vulturina*, is (in adult plumage) characterized by a black bare facial skin (covered by black bristles) extending up to the central crown. Until recently, birds with an orange and completely bare head occurring in the same area were considered immatures of Vulturine Parrot, but it appears that these birds in fact represent a separate species which has now formally been described as *Pionopsitta aurantiocephala* (Gaban-Lima, R, Raposo, M A & Höfling, E 2002. Description of a new species of *Pionopsitta* (Aves: Psittacidae) endemic to Brazil. Auk 119: 815-819).

The new species, for which the vernacular name **Bald Parrot** was proposed elsewhere, is characterized by the completely bare orange head. While studying series of skins and recently collected specimens, the authors discovered that the youngest immature stages of Vulturine Parrot have green-and-yellow head-feathers and that with the loss of these feathers the black bare skin appears; an immature stage with a bare head which is *not* black simply does not exist. Hence, the assumption that the orange-headed birds were immature Vulturine Parrot is no longer valid. Not unimportantly, it was also found that some of the recently collected orange-headed birds had well-developed gonads and therefore must have been adults.

P aurantiocephala is now known from a few localities along tributaries of the lower Madeira and upper Tapajós rivers. It occurs probably sympatric with Vulturine Parrot on both sides of the lower and middle Tapajós river. Although part of this area economically benefits from ecotourism, other parts of the Tapajós river system (as well as the entire southern border of Amazonia) are constantly threatened by destructive logging activities. ANDRÉ J VAN LOON

More Amazonian parakeets The vast Amazonian region still holds many unravelled ornithological mysteries and detailed research into any complex group is likely to reveal revised taxonomic affinities or even as yet undescribed taxa, such as the newly described Bald Parrot *Pionopsitta aurantiocephala* (see above). The Psittacidae prove to be a rewarding subject in this respect, as is shown by a recently published paper about Amazonian *Pyrrhura* parakeets (Joseph, L 2002. Geographical variation, taxonomy and distribution of some Amazonian *Pyrrhura* parakeets. Ornitologia Neotropical 13: 337-363; an electronic appendix of colour images supplementing the paper can be found on the Internet at www.acnatsci.org/publication/appendix4.html). In this paper, Leo Joseph substantiates that **Painted Parakeet** (or Painted Conure) *P picta*, belonging to the group of 25-30 Neotropical *Pyrrhura* parakeets and hitherto treated as a single polytypic species, is actually better considered as consisting of six different species. Two of these have not been described before. The author examined 231 specimens from various collections and obtained general data on an additional 110 specimens, divided over seven geographical groupings. Each specimen was scored for seven morphological characters, as well as for morphometric statistics. On basis of these examinations, the specimens grouped into five forms next to *P picta* (sensu stricto), with each form best treated as a separate species. The status of a sixth form is ambiguous and, awaiting genetic analysis, is left to debate. The author indicates that treating the five forms '… as subspecies of *P picta* under the Biological Species Concept perpetuates blind adherence to the arrangement Peters (1937) introduced with no justification…'. Instead, Joseph advocates that *P picta* and **Red-crowned Parakeet** *P roseifrons* should be treated as two species by all modern species concepts, even if gene flow from *P picta* is suggested in some specimens. The other four groups could possibly be treated as subspecies of *P roseifrons* (rather than *P picta*) but given their disjunct distribution, there is no hard case to consider them one and the same species. In fact, Joseph reverses the burden of proof ('species until proven subspecies'), preferring to treat diagnosable allopatric forms as species rather than subspecies until there is falsifiable evidence that forms could and would interbreed when they might come into contact. Therefore, he proposes to treat every group as a distinct species, based on consistent but often subtle plumage differences. Joseph acknowledges that, with further knowledge, two or more groups may prove to be so closely related that a

rearrangement as subspecies under one species could be justified but states that this speculation should not stand in the way of a revised current taxonomic treatment. In his words: 'Far from setting taxonomy back 100 years as some critics of this approach argue, interim use of a binominal nomenclature does precisely what a taxonomy should do: summarize present understanding of relationships in the group in question'. Since other taxa in *Pyrrhura* have been diagnosed by one or a few subtly varying characters, Joseph considers it justified (or even inevitable) that weakly but consistently differentiated forms are also recognized as species since this treatment accords with previous taxonomic treatment of the genus.

As a result of Joseph's research, in addition to Painted Parakeet (*P picta* sensu stricto) from northern Brazil, the Guianas and southern Venezuela, and Red-crowned Parakeet from two disjunct populations in western Amazonia, four more species are proposed. Two of them were described before and are now provisionally upgraded to species level: **Deville's Parakeet** *P lucianii*, known only from Tefé on the Rio Solimões and the Rio Purús in Brazil, and **Hellmayr's Parakeet** *P amazonum* from eastern and south-eastern Amazonia. Two taxa are new to science and first described in this paper: **Madeira Parakeet** *P snethlageae* from the drainage of the Rio Madeira in Bolivia and Brazil, and **Wavy-breasted Parakeet** *P peruviana*, known from two separate populations in Amazonian Peru. Because of this disjunct distribution, further taxonomic subdivision of *P peruviana* may be warranted after closer study of both populations. The name *P snethlageae* honours Emilia Snethlage, who first recognized the distinctiveness of this form in 1914. The scientific name of *P peruviana* acknowledges the fact that this taxon occurs only in Peru; the vernacular name refers to the extensive subterminal bands on the feathers of the throat and breast. The main plumage differences separating the six taxa are related to the absence or presence and extent of bright red in the plumage, the extent of blue on the forehead and the absence or presence of broad subterminal bands on the throat and breast. Joseph advocates further study of the group, indicating that his revised taxonomic basis in this paper is developed as a platform for full systematic study. In this respect, he emphasizes the need for freshly collected, well-labelled specimens from all the populations under study. ENNO B EBELS

DBA-nieuws

Programma DBA-vogeldag op 1 februari 2003 te Utrecht Het programma van de DBA-vogeldag op zaterdag 1 februari 2003 ziet er als volgt uit. Om 09:00 uur gaat de zaal open. De dag begint om 09:45 uur in zaal 2 (de 'grote' zaal) met de opening door voorzitter Gijsbert van der Bent. Daarna staat voor zaal 2 op het programma: 10:00-11:00 Ricard Gutiérrez: Balearic Shearwater: next European bird to become extinct?; 11:30-12:30 Chris Schenk: Siberië; 13:30-14:30 Peter de Knijff: Hoe is het grote-meeuwencomplex ontstaan: een genetische reconstructie; 16:00-16:15 Gerald Driessens: Jaaroverzicht 2002 België (onder voorbehoud); en (ter afsluiting) 16:15-17:00 Wim Wiegant: Jaaroverzicht 2002 Nederland.

In zaal 1 staan gepland: 11:30-12:15 Jan van der Laan: Mystery bird-competitie; 13:30-14.30 Ricard Gutiérrez: The birding scene in Spain; en 15.00-15.30 Jan van der Laan: oplossingen van Mystery bird-competitie.

De vele pauzes tussen de programmaonderdelen geven de bezoekers de gelegenheid om de stands in de hal te bezoeken en elkaar te spreken.

Het programma staat ook op de website (www.dutchbirding.nl) en kan via een pdf-file geprint worden. Eventuele wijzigingen worden bekendgemaakt via de website of via de Dutch Birding-vogellijn (0900-2032128; EUR 0.35 per min).

De foyer doet dienst als ontmoetingscentrum en als 'vogelaarsbeurs'. Zoals altijd worden er broodjes, snacks en dranken verkocht. Plomp Digital Video geeft een doorlopende voorstelling van het Videojaaroverzicht 2001. Bij de stand van de DBA kan men terecht voor DBA-artikelen, back-issues en vragen aan bestuur en/of redactie. Verder zijn er verschillende stands met onder meer kijkers, telescopen, vogelboeken en vogelreizen. Voor meer inlichtingen en aanmeldingen van stands kan men zich wenden tot Leonie Olivier (leonie.olivier@dutchbirding.nl).

De locatie is zoals altijd het Hoofdgebouw Diergeneeskunde, Yalelaan 1, Utrecht (De Uithof). Deze locatie is bereikbaar met buslijnen 11 en 12 vanaf Utrecht CS, en met de auto via afslag 'De Uithof' vanaf de A27 en A28. Neem na het MCU-complex de eerste weg links (let op de Dutch Birding-borden). Op het grote parkeerterrein voor het gebouw kan gratis geparkeerd worden. De toegang voor zowel leden als niet-leden bedraagt EUR 5.00. LEONIE OLIVIER, ROB OLIVIER & GIJSBERT VAN DER BENT