



## Field identification of Pine Bunting

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The Pine Bunting *Emberiza leucocephalos* breeds mainly in the open woodland and forest edge of Siberia and west to the Urals. It is a partial migrant, wintering in northern China and northern India to Afghanistan, with a few west to the Middle East (regular in northern and central Israel in November–March), and a vagrant elsewhere in Europe (mainly in late autumn and winter). In both the breeding season and the non-breeding season, it overlaps in range with the Yellowhammer *E. citrinella*, with which it hybridises. In winter, mixed parties are found in lightly wooded country, often farmland with deciduous growth, including orchards with interspersed pine woods or open bushy areas; the Pine Bunting, however, prefers higher elevations than the Yellowhammer.

In their interesting assessment of British Pine Bunting records, Bradshaw & Gray (1993) have enriched our knowledge of a species that can cause major identification problems at certain times and in certain places, and have thus added to the process to which Lewington (1990), Lewington *et al.* (1991) and Svensson (1992) have already contributed. Bradshaw & Gray (1993) have highlighted the dilemma confronting observers when faced with a putative Pine Bunting; readers are recommended to refer to their paper as well as to the present one.

The following information is based mainly on nine years of intensive observations by HS of Pine Buntings and Yellowhammers on their common wintering grounds near and around Jerusalem and at other places in northern and central Israel. HS, DAC and AH are currently preparing a book on the identification of difficult groups of species, to be published in 1996 by Macmillan Publishers Ltd, and the painting accompanying this paper (fig. 1 on page 626) is

basically a result of 'the Jerusalem experience' together with museum work carried out in connection with that book.

### General identification features

In structure, behaviour and voice, Pine Bunting and Yellowhammer appear almost identical, even to experienced observers. Adult male and first-year male Pine show an unmistakable chestnut, white and black head pattern, and rufous on the breast. Females of the two species are virtually identical in pattern and coloration, although most Yellowhammers show a variable amount of yellow at least on the central belly, crown and supercilium (Pine lacks all yellow).



Plates 209-211. Above, first-winter female Pine Buntings *Emberiza leucocephalos*, Jerusalem, Israel, December 1985 (*Rami Mizrachi*). Note head and throat-breast patterns and upperpart streaking.

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Plates 212-217. Female Yellowhammers *Emberiza citrinella* of race *erythrogenys*, Jerusalem, Israel, mid-winter 1980s (*Hadoram Shirihai*). Top left, first-winter, 'non-yellow' plumage. Top centre, adult, 'non-yellow' plumage: note crown and upperpart streaking. Top right, first-winter, normal plumage: note yellow pigmentation. Centre left, adult, 'non-yellow' plumage: note head and throat-breast pattern. Centre right, first-winter, normal plumage: note yellow pigmentation. Bottom, adult, 'non-yellow' plumage: note slight yellow tone on remex fringes.



The main problem is separating female Pine from 'non-yellow' female Yellowhammers (the latter are not uncommon regionally, e.g. in Israel in winter). At close range, most individuals of both species exhibit a combination of constant differences, but a degree of overlap exists and trapping has shown that a few are so alike as to be inseparable in the field. Adult and first-year females are largely similar (first-years have primaries and rectrices more pointed and worn, and unmoulted tertials more worn), but most 'non-yellow' Yellowhammers are first-years.

### Identification of females

In the field, and even in the hand, the only useful, constant differences between females of Pine Bunting and those of 'non-yellow' Yellowhammer are as follows:

1. *Remex fringes* White or whitish-buff on Pine, never with any yellowish pigment as on most Yellowhammers.
2. *Head-top streaks* On Pine, crown streaks are generally more marked on individual feathers (creating total crown pattern), on average blacker and narrower, more often almost confined to feather shafts, with slightly more pointed ends (brownier on Yellowhammer, averaging wider and with less or no point). Streaks are more restricted to the lateral crown on Pine, with far fewer on the central crown (can appear as a paler crown-stripe), this pattern added to by the deeper and higher supercilium (often resulting in appearance of a better-defined or prominent darkish lateral crown-stripe). Yellowhammer normally (not always) shows a more evenly streaked crown and narrower supercilium. Otherwise, female Pine shows striking contrast between lateral part of crown and paler and almost unstreaked supercilium (but supercilium sometimes whitish, with very thin faint streaks), whereas Yellowhammer shows less contrast owing to its greyer supercilium. Most (but not all) female Pine tend to have a conspicuous brownish patch on rear lateral crown area and side of upper neck, created by slightly denser streaking with more brown or rufous fringes, whereas this patch is reduced or lacking on most Yellowhammers.
3. *Side of head* On female Pine, the apparent broadness of the supercilium is also a result of its reaching downwards to almost half eye level; on most 'non-yellow' Yellowhammers, the supercilium reaches only just below top of eye. Pine's broader and higher supercilium (well apparent in front of eye) is almost concolorous with the (broader) paler loreal area, but contrasts greatly with the (smaller) ear-covert area; as opposed to Yellowhammer's darker loreal area which is more concolorous with the (wider) ear-covert area, together producing less contrast with the greyer (whitish on Pine) supercilium. The whitish eye-ring of Pine Bunting is on average more neatly defined than Yellowhammer's and stands out more clearly.
4. *Nape colour* The grey area on sides of neck, nape and hindneck of Pine is slightly suffused with and/or faintly streaked brown, whereas on Yellowhammer it is purer and cleaner grey and from most angles covers a smaller area than on most Pine.

5. *Underparts* Pine Bunting, apart from its moustachial stripe tending to appear more prominent than Yellowhammer's, also tends to have a stronger and better-defined malar stripe composed of three or four rows of blackish blotches, rather than Yellowhammer's generally weaker stripe of two or three rows of blackish-brown blotches (but can appear as conspicuous as on Pine). Pine tends in general to have fine spots or streaks over a wider area of the throat, often spread quite evenly and extending from lower throat up towards bill, whereas Yellowhammer's throat shows fewer markings (often extending just to lower or central throat). The entire underparts of Pine are whiter, apart from a buff suffusion on chest, and the upper-breast streaking is more blackish, fading and with intermixed rufous-orange markings towards breast sides and flanks. A comparable pattern occurs on Yellowhammer, but the latter lacks Pine's diagnostic fine blackish markings on upper breast. Pine's undertail-coverts are on average more finely and faintly streaked than on Yellowhammer, or are even unstreaked (unlike Yellowhammer), but can, rarely, be quite heavily streaked.

6. *Less-obvious differences* These include Yellowhammer's diagnostic yellowish underwing-coverts (sometimes inconspicuous). Female Pine tends on average to have more intense rufous pigments to the fringes of the lowest row of scapulars, with the lesser upperwing-coverts more uniform grey-brown (less grey than on Yellowhammer). Pine's head often appears more square-shaped, peaking at rear crown, and a small crest is erected when nervous (indistinct on Yellowhammer). Both species show about the same primary projection (sometimes slightly longer on Pine), and both also show two closely spaced primary tips at the wingtip, as well as one shorter primary tip; only Pine, however, shows (not always) a fourth primary tip (or tertial tip falls approximately level with this fourth tip or, rarely, slightly conceals it). Otherwise, a few 'very old' female Pine Buntings show an indication of non-adult male pattern, with at least some rufous on the breast and even a whitish patch on the central crown and more chestnut coloration on the head.

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Fig. 1. Female Pine Buntings *Emberiza leucocephalos* and Yellowhammers *E. citrinella* (Alan Harris). (Reproduced by permission of Macmillan Publishers Ltd)

Top left and bottom left,  
female Yellowhammer lacking yellow.

Top right, normal female Yellowhammer.

Bottom centre and right, female Pine Bunting.



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