

DISTINGUISHING TWO-BANDED WHITE/BUFF-TAILS

Queens (large, robust, antennae relatively short)



Bombus terrestris ssp. *audax* queens are very large with a tail that varies from pale-buff to deep-buff. The chestnut collar varies from obvious to entirely missing but is never very broad. The colour of the band across tergite 2 also varies somewhat in tone but this and the collar are never bright yellow and the tail is never pure-white (unless it is a vagrant/introduced continental queen).



Bombus lucorum



Bombus cryptarum



Bombus soroensis



Bombus magnus

Queen *lucorum* and *soroensis* are noticeably smaller than *terrestris*. *Magnus* and *cryptarum* queens can approach *terrestris* in size. Most *magnus* queens can be readily distinguished by the long collar that extends down the sides of the thorax well below the wing base. But confusing intermediates with *cryptarum/lucorum* are not unusual. *Soroensis* queens lack a solid yellow band across tergite 2. Rather, the band is made up of 2 abutting crescents i.e. the band narrows in the middle and yellow hairs extend onto the sides of tergite 1. There also are subtle differences between *soroensis* and the other three in face length and mandible shape but these are not easily assessed in the field. Queens of *lucorum* and *cryptarum* cannot be reliably separated in the field though *cryptarum* averages larger, tends to have broader yellow bands, and the yellow collar often has a conspicuous intrusion of black hairs in front of the wing bases (sometimes forming an S-shape). The chance of seeing *cryptarum* away from northern/western hills and moors is slim but *lucorum* is the typical white-tail of lowland urban and agricultural landscapes.

Workers (resemble small queens, antennae also relatively short, often with a pollen load on hind legs)



Worker *terrestris* (left) tends to have a dirty-white tail with a buff tinge where it meets the black hairs, and the body bands are buff-tinged yellow. Workers of *cryptarum*, *lucorum* and *magnus* (centre) do not seem to be reliably distinguishable in the field but all have a pure-white tail and lemon-yellow bands **but faded workers can be difficult to separate from faded *terrestris* workers**. *Soroensis* workers (right) can be separated as per queens. They can have a pure white tail or one that is orange-tinged where it meets the black hairs.

Males (worker-sized or slightly larger, slimmer, antennae longer, never carry a pollen load)



Bombus terrestris

Bombus 'cryptarum'

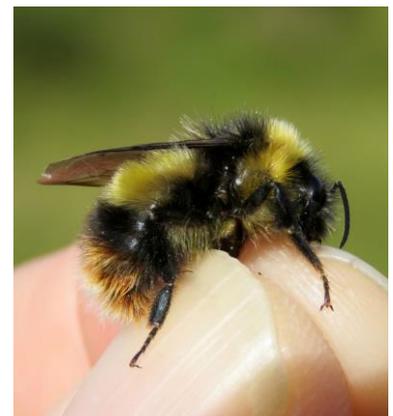
Bombus lucorum



Bombus 'magnus'



Bombus soroensis (typical)



Bombus soroensis (peach-tailed)

Male *terrestris* has a dirty-white or pale-buff/buff-based tail (occasionally clean white) with buff-tinged yellow bands. The head is completely black-haired and the collar peters out long before it meets the belly. Putative *cryptarum* males are similar but have brighter lemon-yellow body bands and a pure-white tail and look a bit like large workers. *Lucorum* males have lots of yellow on the face and top of head, and the collar spreads broadly onto the belly. The white tail often spreads up the sides of the abdomen and the band on tergite 1 can extend onto the scutellar fringe. The black parts of the body are suffused with yellow or grey hairs, often creating a grizzled appearance. Putative *magnus* males have some yellow on the face, a collar that extends broadly to the belly and the scutellum can be yellow-haired. But the black areas are intense and it never has a grizzled look. Intermediates with *cryptarum* that are impossible to assign are not unusual. *Soroensis* males are highly variable but are smaller and slimmer than the previous species, with longer antennae and very slim hind legs (especially the basitarsi). The tail is usually white with an orange base but can be completely white, completely peach/red or highly reduced leaving the abdomen tip almost black.