

Note on the Spread of Carniolan Stocks and its Implications

In recent years many of the imports of honeybees into the UK have been of Carniolans (*Apis mellifera carnica*) originating in SE Europe but bred and raised in Germany, New Zealand and elsewhere as well as in their homeland in Slovenia. Some of these stocks are very gentle and productive bees whereas others are exceedingly swarmy and disease-prone. Several writers and some beekeepers with personal experience record that the second generation hybrids between near-native stocks and Carniolans can be excessively bad-tempered and hard to manage. Hybrid colonies are also very vigorous, but not necessarily adapted to Scottish conditions.

Carniolans represent a particular threat to the remaining stocks of pure native honeybees (*Apis mellifera mellifera*) for three reasons: they resemble native honeybees in general colour and the casual observer may not notice the spread of this new type in their apiary; the most highly bred stocks are in themselves gentle stocks and easy to handle so are favoured in some quarters; they are being sold widely particularly to beginners by bee traders active on the internet and by established suppliers, even one based in the Highlands and selling widely in the north according to reports we have received.

These bees have also been imported in large numbers by some commercial beekeepers and it should be expected that stocks belonging to hobby beekeepers working the same areas will be affected by their drones.

It should also be noted that there have been historical importations of bees on a considerable scale for many decades, including *A. m. mellifera* from France and elsewhere, Caucasians, Italians, Buckfast and now Carniolans. What is different about the current importations is the scale and the ease of the spread of exotic genetics by well-meaning beekeepers, particularly beginners, to every corner of Scotland.

As Carniolans are the most likely dark bee to be encountered by hobby beekeepers other than the native honeybee, we offer these notes to help discriminate stocks. Other imported bees such as Italians (*A.m. ligustica*) and Buckfasts (bred strains with complex ancestry) are easily discriminated by colour. Caucasian honeybees (*A.m. caucasica*) are brown but less often traded these days.

This picture, grabbed from a French TV clip (from France 5's 'C dans L'Air'), of these Tayside Carniolans sourced in New Zealand shows the features:

1. slender and tapered abdomens rather than stocky, less tapered ones
2. pale biscuit coloured body hair (look for a pale halo around the head and thorax) rather than mid-brown
3. broad rather than narrow bands of tomentum on the abdominal segments



Some of these differences can also be seen in these two pictures:



The *A.m.m.* on the right are particularly dark individuals without any visible tomentum bands, but the broader bodies and the brown hair are typical. However the large underlying genetic distance between these bee races is reflected in their very different wing morphometry which we recommend for the certain identification and discrimination of the races and their hybrids.

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