

Which aphid species do I have?

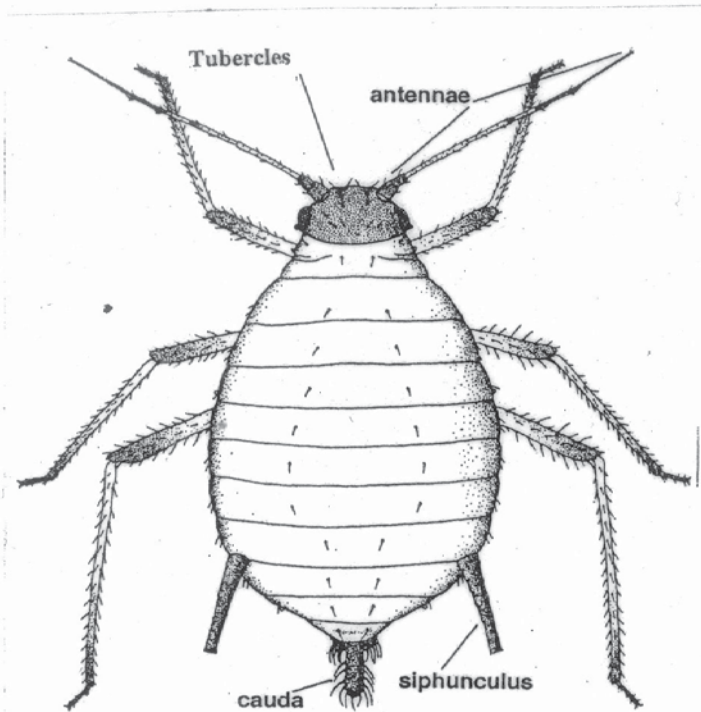
Getting it right, now & for the future

Correct identification of the species of aphid present is a critical step in determining a management strategy. Many winged forms of non-pest aphid species will settle on cotton and test feed, then move on when they find it unsuitable.

Simone Heimoana and Sandra Williams (CSIRO Plant Industry)

While there are many aphid species around us, the main species that colonise cotton are:

- *Aphis gossypii* (cotton aphid)
- *Aphis craccivora* (cowpea aphid)
- *Myzus persicae* (green peach aphid)



To tell them apart you can use three simple physical characteristics:

1. Tubercles

Tubercles are small humps on the aphid's head near the base of the antennae. They may be

- absent (*Aphis gossypii*)
- weakly developed (*Ropalosiphum padi*)
- well developed (*Myzus persicae*)

2. Siphunculi or Cornicles

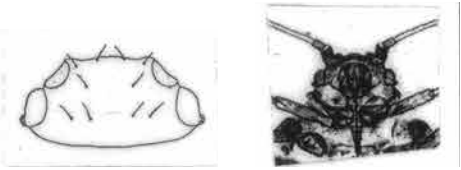
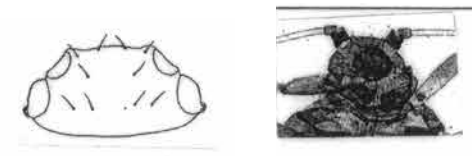
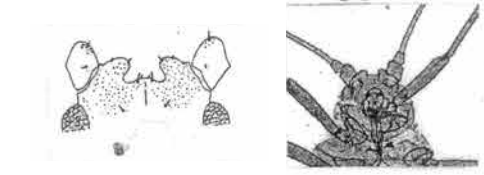
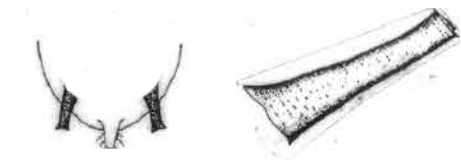

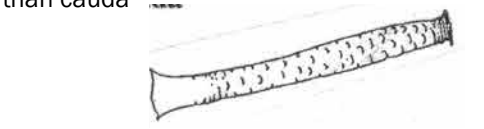
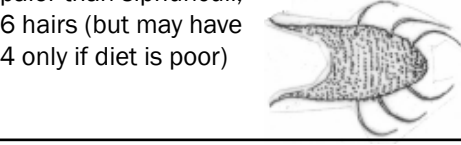
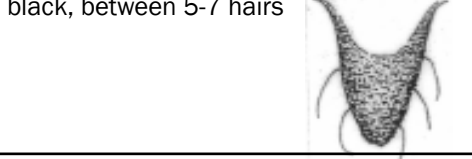

Siphunculi are usually tubular appendages at the lower end of an aphid's body. They vary greatly in shape and length and are used for excreting waxy secretions and alarm pheromones.

3. Cauda


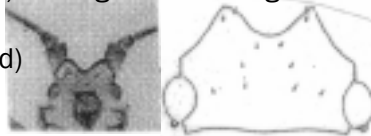

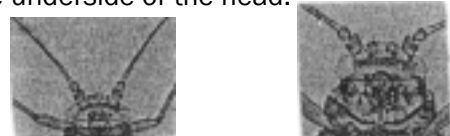

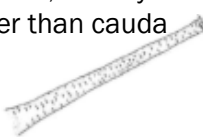
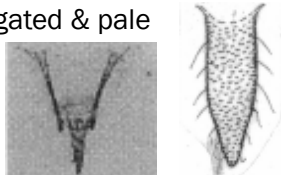




The cauda is an appendage at the bottom of the aphid between the siphunculi. It may have hairs on it. Its shape, colour, and number of hairs are characteristic of a species. It is used to flick off honeydew.

myBMP This best practice information pack is located on the myBMP website www.mybmp.com.au



Characteristic	<i>Aphis gossypii</i> (cotton aphid)	<i>Aphis craccivora</i> (cowpea aphid)	<i>Myzus persicae</i> (green peach aphid)
Colour (of wingless forms, not a reliable factor in identification)	Can be any colour from pale yellow (yellow dwarves) to light green to olive green to nearly black depending on nutritional status and host plant	Adults black, immatures grayish black to black, slightly dusted with wax. Always reddish black when squashed.	Uniformly pale green, grey green or mid green.
Tubercles	Weakly developed 	Weakly developed 	Frontal tubercles strongly convergent. 
Siphunculi	Black, somewhat darker than cauda, cylindrical, shorter than or as long as cauda. 	Black, longer than or as long as cauda 	Same as body colour but tip somewhat brownish, long slender with slight swelling towards the tip, siphunculi much longer than cauda 
Cauda	Wedge-shaped, pale or dusky somewhat paler than siphunculi, 6 hairs (but may have 4 only if diet is poor) 	Spear-shaped (hastate), black, between 5-7 hairs 	Same as body colour, long and swollen 
Other	A rather non-descript species	Body very black & shiny	No waxy secretions



Characteristic	<i>Acyrtosiphon pisum</i> (Pea aphid)	<i>Acyrtosiphon kondoi</i> (Blue-green aphid)	<i>Therioaphis trifolii</i> (Spotted alfalfa aphid)
Colour (of wingless forms, not a reliable factor in identification)	Usually light green, occasionally pinkish, larger than <i>Myzus persicae</i> . Immatures very lightly dusted with wax	Bluish green, may be slightly smaller than <i>A.pisum</i> and may be confused with that species.	Pale yellow, greenish-white, small & rather shiny, with rows of dark pigmented knobs on its back. 
Tubercles	In wingless forms: large & diverging (V-shaped). In winged forms: large & diverging (W shaped) 	Smaller & less diverging than in <i>A.pisum</i> (Shallow W-shaped) 	Clear black line between the eyes on the underside of the head. 
Siphunculi	Very long & skinny, pale at base, darker at end 	Shorter than in <i>A.pisum</i> , usually more than 1.7 times longer than cauda 	Very short & stubby
Cauda	Long, thin, elongated & pale 	Shorter than <i>A.pisum</i> , 	Lobed cauda with bilobed anal plate. 
Other	Leg joints are darker than rest of leg 	Leg joints not darker than rest of leg 	A very distinct aphid due to the hairy knobs on its back

Reference: Blackman & Eastop, 2000. John Wiley & Sons, London

