

## Key to separate exotic ant species from native Australian species

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1. Waist 1-segmented containing only a petiole. 2  
Waist 2-segmented containing a petiole and post-petiole. 17
2. Sting absent at the apex of the gaster. 3  
Sting present at the apex of the gaster (= Subfamily Ponerinae). Native species
3. Apex of gaster with a circle of hairs (= Subfamily Formicinae). 4  
Apex of gaster without a circle of hairs (= Subfamily Dolichoderinae). 12
4. Antennae with 10 or 11 segments. 5  
Antennae with 12 segments. 9
5. Palp formula 6, 4. 6  
Palp formula less than 6, 4. Native *Acropyga*
6. Dorsum of mesosoma glabrous, propodeum lacking spines or teeth. 7  
Dorsum of mesosoma with or without hairs, propodeum with projecting spines or teeth. Native *Stigmacros*
7. Workers > 5mm. Mesosoma elongate and slender. *Anoplolepis gracilipes*  
Exceptionally long legs and antennae, with the legs at least as long as the body. Head and mesosoma light yellow, with darker abdomen. Second and third funicular segments the same length as the fourth segment.  
Workers < 5mm. Mesosoma not elongate or slender. 8  
Antennae may greatly exceed the occipital border, but the

legs are shorter than the length of the body. Second and third funicular segments much shorter than the fourth segment. (= *Plagiolepis*).

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|----|--|--|
| 8  | Antennal scapes exceed the occipital border by at least twice their maximum diameter.<br>If the antennal scapes exceed the occipital border, it is only by as much as their maximum diameter.  | <i>Plagiolepis alluaudi</i><br>Native<br><i>Plagiolepis</i>      |
| 9  | Metapleural gland present (small opening at the rear corner of the mesosoma above the hind leg). Antennal sockets separated from the rear margin of the clypeus by a distance shorter than the smallest diameter of the scape. Propodeal spines absent. Upper surface of the head and body with multiple pairs of stout hairs.<br>All features not as above. | 10<br><br><br><br><br><br><br>Native species                     |
| 10 | Antennal scapes exceeding occipital margin by two-thirds their total length.<br>Antennal scapes exceeding occipital margin by half or less their total length.   | <i>Paratrechina longicornis</i><br>11                            |
| 11 | A pair of short setae present on the propodeum<br><br>Propodeum glabrous   | Native<br><i>Paraparatrechina</i><br>Native<br><i>Nylanderia</i> |
| 12 | Petiole flat without an upright node and overhung by the first abdominal segment.<br>Petiole with an upright node and not or very weakly overhung by the first abdominal segment.  | 13<br><br>16   |
| 13 | Only four gastric tergites visible in dorsal view, with the  | 14   |

- fifth tergite reflexed below the fourth (= *Tapinoma*).
- All five gastric tergites visible in dorsal view, with the fifth tergite not reflexed below the fourth (= *Technomyrmex*). 15
- 14 Bicoloured, head and mesosoma dark chocolate brown to black, abdomen legs and antennae paler to white. Scapes exceed occipital border by at least twice their maximum width. *Tapinoma melanocephalum*
- Predominantly unicoloured, typically all yellow or black. If scapes exceed the occipital border, it is by no more than their maximum width. Native *Tapinoma*
- 15 Head entirely finely punctuate. Dorsum of head without hairs. Mesosoma with sparse hairs as long as the widest diameter of the eyes. Body uniformly dark chocolate brown to black with tarsi and posterior half of antennal scapes paler to white. *Technomyrmex albipes*
- Note. This assumes that *T. vitiensis* is a separate species (not junior synonym of *T. albipes*) and is not exotic.
- All features not as above. Native *Technomyrmex*
- 16 Mesosoma smooth without projections. No punctations or striations on any body parts. Occipital border convex. *Linepithema humile*
- Anterior clypeal border broadly concave without a central projection. No metanotal notch or U-shaped groove. Frontal carinae entirely concave. Eyes in anterior half of head. Head as wide as long.
- All features not as above. Native species
- 17 Antennae with 10 to 12 segments. Pronotum and mesonotum fused and inflexible. Frontal lobes present. Tarsal claws without teeth. Tibiae of the hind legs either lacking a spur, or 18

	the spur lacks comb-like teeth. Body never >10mm (= Subfamily Myrmicinae [part]).	
	Not as above.	Native species
18	No propodeal spines.	19
	Propodeal spines present.	30
19	Anterior clypeal margin with a single hair at the midpoint.	20
	Metanotal groove present. (= Tribe Solenopsidini).	
	Anterior clypeal margin with a pair of hairs at the midpoint.	Native
	Metanotal groove absent.	<i>Rhopalomastix</i>
20	Antennal club with 2 segments (= <i>Solenopsis</i> ).	21
	Antennal club with 3 segments.	23
21	Size > 1mm, very polymorphic with largest workers 3x the size of the smallest workers. (= subgenus <i>Solenopsis</i> ).	22
	Size < 1mm, only slightly polymorphic with largest workers <1.5 times the size of the smallest workers. (= sub genus <i>Diplorhoptrum</i> ).	Native <i>Solenopsis</i>
22	Median clypeal tooth present.	<i>Solenopsis invicta</i>
	No median clypeal tooth.	<i>Solenopsis geminata</i>
23	Eyes present (= <i>Monomorium</i> ).	24
	Eyes absent.	<i>Anillomyrma</i>
24	Clypeus not projecting forward and without projecting teeth.	25
	Clypeus projected forward or with 1 or more projecting teeth.	Native <i>Monomorium</i>

25	Antennae with 11 segments.	Native
		<i>Monomorium</i>
	Antennae with 12 segments.	26
26	Head and abdomen dark brown to black, mesosoma, waist, legs and antennae paler to yellow. Sparse hairs covering entirety of body. Scapes do not exceed the occipital border. All features not as above.	<i>Monomorium floricola</i>
		27
27	Entire body except abdomen finely punctate. Sparse hairs covering the entirety of the body. Petiolar node barely exceeding the height of the post-petiolar node. Entire body uniformly yellow. All features not as above.	<i>Monomorium pharaonis</i>
		28
28	Eyes positioned anteriorly on head. Petiolar peduncle elongate anteriorly as long as the petiolar node is wide. Eyes positioned medially on head. Petiolar peduncle not elongate anteriorly, being much smaller than the width of the petiolar node.	29
		Native
		<i>Monomorium sordidum</i> group
29	Head and mesosoma bright yellow, posterior two thirds of abdomen darker to black. Slightly polymorphic. Entire body almost uniformly dark brown, paler on ventral surfaces. Slightly polymorphic.	<i>Monomorium destructor</i>
		<i>Monomorium mayri</i>
30	Antennae with 11 segments. Antennal club with two segments. Clypeus entirely smooth without ridges. Frontal carinae extending from antennal insertions to the occipital border. Workers monomorphic and uniformly yellow. All features not as above.	<i>Wasmannia auropunctata</i>
		31
31	Antennae with 12 segments. Antennal club with three	32

segments. Palp formula 2:2 or 3:2. In side view, the propodeum is lower than the pronotum, with the mesonotum forming a steep slope between the pronotum and propodeum so that the mesosoma does not form a uniform arch (= *Pheidole*).

All features not as above.

33

- 32 Minor workers - Postpetiole elongate, being as long as the petiole and peduncle, and twice as wide as the petiole. Antennal scapes long, exceeding the occipital border by at least one third of their length. Propodeal spine short, projecting less than the width of the antennae. Long sparse hairs distributed throughout the body, scapes hairy with hairs longer than three times the scape diameter. Eyes round and positioned in posterior half of head. Body smooth and shiny, with some punctations on the posterior half of the mesosoma.

*Pheidole  
megacephala*

Major workers - Occipital border strongly concave and without projections. Head width only slightly shorter than length. Colour of both worker classes variable from pale orange to dark brown. Mesosoma paler than head and abdomen.

All features not as above.

Native *Pheidole*

- 33 Sting with a pennant-shaped extension at an angle from the shaft. A sharp-edged ridge present directly below the antennal sockets to the anterior clypeal margin (= *Tetramorium*).

34

Both features not as above.

Native species

- 34 Clypeus with three strong and complete longitudinal carinae of equal size. Remainder of clypeus smooth and shiny without any rugosity (= *Tetramorium pacificum* group).

35

Clypeus with more than three longitudinal carinae, or carinae weak and not always complete. Remainder of clypeus with any level of luster or additional rugosity. 36

35 Abdomen much darker than rest of body. Petiolar node in side-view approximately square and not sloping upwards posteriorly. *Tetramorium bicarinatum*

Body uniformly coloured. Petiolar node sloping upwards posteriorly. Native *Tetramorium*

36 Propodeal teeth short and stout, approximately as long as the longest hairs on the mesosoma and of equal size to the metapleural lobes. Colour uniformly yellow. Mesosomal hairs very short, thick and apically blunt. *Tetramorium simillimum*

All features not as above. Native *Tetramorium*