Cerceris of eastern Australia: quick guide to photo identification Based upon:
Evans, H.E. 1981 (1982). The genus Cerceris in eastern Australia (Hymenoptera: Sphecidae). Transactions of the American Entomological Society, 107(4): 299-380. (available from JSTOR)
Evans, H.E. 1988. Further studies on the systematics and nesting behaviour of eastern Australian Cerceris wasps (Hymenoptera: Sphecidae). Transactions of the American Entomological Society, 114(1): 1-13. In this matrix, I have included only those features most useful for identification from field photos. For example, the shape and sculpturing of the pronotal enclosure are important for use of Evans' keys, but this character is not

Evans, H.E. 1981 (1982). The genus Cercer's in eastern Australia (Hymenoptera: Sphecidae). Transactions of the American Entomological Society, 107(i): 299-380. (available from JSTOB) Evans, H.E. 1988. Further studies on the systematics and nesting behaviour of eastern Australia (Hymenoptera: Sphecidae). Transactions of the American Entomological Society, 114(i): 1-13. In this matrix, I have included only those features most useful for identification from field photos. For example, the shape and southuring of the pronotal enclosure are important for use of Evans' keys, but this character is not visible in most photos I have seen. Conversely, while the colour pattern of the thorax and propodeum can be helpful, and are usually visible in photos, they are variable in most species so I have not included them in the table. This matrix is only intended as a first-step tool for identification. It is still necessary to check candidate IDs against full description in Evans 1981. Prepared by Kerri-Lee Harris (June 2023), for personal use. The table may include errors and omissions. Shared under CC BY-NC-SA agreement. See also Southernforestific net																						
Prepared by Kerri- See also southern version 8 (15/6/23)	nforestlife.net	north west south east south south inland southern west	h t				gaster col Y (yellow); O (orange); R (rufous/brown)	our ; I (ivory); W (white); B (black)					face & h	head markings head	female clypeal lamina	clypeus & mandib	ole clypeus colour	mandible	mesopleura	structural features enclosure striae	petiole shape	
red = female blue = male	known range (Evans 1981) blue = common; gold = present; grey = rare	QLD coast east QLD; coastal NSW; central coarris brisbane Sydney Sydney Coast NSW; eastern NSW; eastern NSW; west NSW; east Sydney NSW NSW NSW west NSW; west NSW; east Sydney NSW; west NSW; east Sydney NSW; west NSW;	distinctive features	Base or dominant body colour	y Markings	petiole (T1) T2	T3 T4	Т5 Т	-6 T7 VEN	NTER colour	leg colour (of types, so may vary) ('R' covers a range of red-brown colours)	antenna colour (of types, so may vary)		(= with or without pair of spots on vertex, upper genae)	• •	(✓ = weakly /moderately convex with 3 small teeth)		(✓ = yellow with black apex, standard shape)	(✓ = simple, rounded)		(√ = "as long as wide")	page number Evans 1981
SPINIPLEURIS GROUP megacantha	large; females with very large, spinose processes of the control o	on mesopleura; hind trochanters pale in both sexes	female with unusual clypeus (concave apically)	BLACK	dull YELLOW	Y, B basal triangle (bordered R) Y (transverse anteromedial/bas B, bordered R)	sal area B (narrow Y-R apically) dull Y (narrowly E basally)	B dull Y (narrowly B dull Y (pyg basally)	gidium dark R) - S4	S1,2,6 Y 4,5 banded Y	coxae & trochanters B & pale Y hind trochanters W or pale Y (at least in part) Femora: R, partly B posteriorly or more Tibiae: R Tarsi: R (fore & mid pale Y)	Scape: Y below; dark R above Flagellum: B above, pale R below & at tip	Y to just above antennal sockets (including clypeoantennal space & ridge)	√	none	weakly, broadly concave apically, with a very small median tooth; below the concavity with a small horizontal surface, sides of concave margin forming large, black teeth	√	✓	process very large, spinose, projecting strongly from sides of thorax (as in spinipleuris & balteata)	few, weak, lateral; weakly shining	very slightly W	mandible with large tooth on inner margin, well back from apex; clypeus wide (W:H 4:1); head very broad 1.45x wide as high); eyes strongly divergent below
megacantha	border, NE)	Y	Thorax extensively maculate Y; gaster extensively dull Y female: Hind & Mid trochanters B & light Y - cf spinipleuris & balteata	BLACK	YELLOW	Y, B basal triangle (bordered R) Y (transverse anteromedial/bas B, bordered R)	в в (аркая у рапо		Y (pygidial plate R)	as above	coxae & trochanters mostly pale Y Femora: R, streaked B Tibiae: R (fore pale Y) Tarsi: R (fore & mid pale Y)	Scape: Y, B steak above Flagellum: pale R basal half (dark above); distally wholly B	Y to just above eye sockets	V		rather flat; teeth widely spaced	Y, apical teeth B	Y basally, B apical half		few, weak, lateral; weakly shining	√ (viewed dorsally, sides slightly divergent behind)	
spinipleuris balteata	known only from single type specimen from SA (1918 collection)	Y	description of gaster colours unclear! Large; Black with Bright Yellow markings large; black with limited apical bands (T2, 4-6); white trochanters	BLACK	IVORY	B BRIGHT Y (basal third B narrow apical band = I (varies, O-R)	B; narrow apical ba	BRIGHT Y (except extreme base) B; narrow apical band O- = I (varies, may be O-R)	B -	В	Femora: B (R apex) Tibiae: R Tarsi: R (mid whitish basally; hind darkened (hind trochanters W; other basal segments B) Femora: B (R apically) Tibiae: fore & mid pale R (B posteriorly); hind R Tarsi: fore & mid pale R; hind grey-brown	B (light B beneath basal flagellomeres) B (flagellum R beneath on basal half)	IVORY (cf Y) (but varies)	√	recumbent no lamina, but	elevated then abruptly declivous & weakly concave	√ (bright yellow) IVORY (cf Y)	Y basal 1/2 B (streaked I basal half)	drawn out into a long, m	any fine striae radiating from pase (may be weak or partly absent)	wide > wide	314
balteata	Appears to have limited range, from northern Vic to northeastern NSW, including ACT. Most specimens from moderate altitudes in or near Dividing Range.	Y	much colour variation (tergal bands may be wide; pale yellow to orange-brown) female: Only hind trochanters W (contrasting with coxae & femora) - cf megacantha (but as in spinipleuris)	BLACK	IVORY	narrow apical band = I (varies, O-R)	,	" (broader band) " (broad	ler band) B S2 ma	nay be coloured	as above, but fore & mid tarsi W; anterior tibiae near W Also: trochanters & tips of hind coxae W	В	66	66		strongly convex with 3 strong teeth	ís.		m	any fine striae radiating from pase (may be weak or partly absent)	V	314
FROGGATTI GROUP froggatti	reasonably large; type A enclosure smooth or transver reasonably common in limited range; central NSW (Coonabarabran) to just north of Tropic of Capricorn (Byfield, QLD) not particularly variable (except in extend of R on apical part of	rsely striate; females have small mesopleural tubercle	large; extensively orange-brown	BLACK	ORANGE-BROWN	B B (O-R latero-apically)	B (O-R more broadly laterally & apically)	O-R (p. darker)	ygidium - variable - O-R tra	ransverse bands	Femora: B basally; dull R apically Tibiae: dull R	Scape: dull R Flagellum: B (dull R apically)	sides of lower face yellow-brown	✓ small yellow-brown spot; head generally BROWN	none, but with 2 tubercles in centr of median lobe	e 4 rounded teeth	? brown ? black ?	В	small tubercle	smooth & polished	wide, convex dorsally & laterally	eyes strongly divergent below 326 enclosure smooth/polished
froggatti sedula	gaster) This is the largest Australian Cerceris		Large (varies)	BLACK	ORANGE-BROWN ORANGE-BROWN	B B (O-R latero-apically) B O-R (some B medioapical	O-P (narrowly B paired irregular O-	-R O.B. (system a rides B)	S2-3 we	omewhat suffused B medially) reakly suffused O- R laterally	Tarsi: dull R	Black (basal 4 segments & apical segment parly suffused light R) Scape: B Flagellum: B (brownish beneath)	Y to above antennal sockets, but mostly B clypeoantennal space & ridge O-R spots on each side of face, reaching sockets but not touching eye margins	✓ small yellow-brown spot	subporrect; strongly tapered	strongly convex in centre	median lobe Y (apically B); lateral lobes B	B	small, angular tubercle	smooth & polished	slightly wide >> wide (> 1/2 width of T2)	enclosure smooth/polished pronotal carinae strong, reaching dorsal surface of collar
sedula fluvialis	Restricted area in NW Vic and adjacent SA (inc Swan Reach) Although holotype is from WA, others from Cobar, Bourke Nappa	Y	female almost entirely bright orange- yellow, inc most head & thorax, & enclosure; T4-S4 black		EXTENSIVELY BRIGHT O-Y (including much of	B O-R (very narrowly B anterior posterior margins) O-Y O-Y	or & O-R (very narrowly B anterior & posterior margins) O-Y B	B Over posterior 2/3	s posterior some O-R basally S3 wear gins)	akly suffused O-R O-Y, except S4 = B	Femora: B Tibiae: B (fore & mid suffused Y-brown) Tarsi: B (fore & mid suffused Y-brown) wholly O (coxae partly darkened)	Scape: B Flagellum: B (brownish beneath basal half & tip) wholly O	Y to level of just above antennal sockets, including subantennal space	entirely bright O-Y, except narrow B band between eye tops (inc ocelli) may be incomplete or absent	none	but small, rounded tubercle in centre of median lobe; apical margin of clypeus with 4 rounded teeth	B (basal 2/3 median lobe O-Y) bright O-Y (darkened narrow apical margin)	B ORANGE, with B tips		entirely covered with transverse/oblique, slightly arching striae	wide (note the T2 relatively narrow cf petiole only 1.65!) wide	oval, raised tyli on last 2 segments
fluvialis	Merrie (west QLD), & central SA (all arid environments) rarely seen, but may be widely distributed (coastally in north, inland	Y	A highly varied species, including in colour of tergites (but rarely in collections) Black with limited, dull orange markings	(S)	thorax, esp in female)	B B (narrow, irregular Y-R band base, interrupted medially) entirely B. Varies	or B (may be Bright V	O-Y largely dull O-R (may be Bright Y) largely (may be	dull O-R	rely O-Y, except 5 with B bands	wholly O-Y Legs VERY DARK BROWN ("piceous"), except anterior surface tibiae streaked Y	Scape: Y Flagellum: R; apical 4 segments B Scape: largely Y Flagellum: B	Y to slightly above antennal sockets Y spot on each side of face ?	B?	broad, arcuate lamina	slightly polished, subcirculartruncate apicallly, with 2 teeth each side	Y B (may have yellow spots)	В	moderately strong, spinose process	entirely covered with transverse, slightly arching striae strongly polished	slightly wide	last two flagellomeres with raised tyli, apex curved & subtruncate propodeal enclosure smooth/shiny; lateral carinae very strong, extending short
perkinsi inexpectata	Rare (only 4 specimens in collection), all from coastal or near-coastal		(sometimes brighter)(female) Black with yellow markings (male) entirely Y face; otherwise colour variable	BLACK	Extensively marked Y (mesoscutum &	B Y transverse band, surrounde (may be wholly B or wholl) Y (B mediobasal triangle)	spots) (Hay be wholly B) wholly Y)	or Y (very narrowly B apically) Y (very napically) Y (anterior margin B) du	eally)	В	Femora: B (apically R) Tibiae: B (fore & mid streaked Y) Tarsi: B (fore & mid brownish) Femora: R (streaked grey above) Tibiae: R Tarsi: R	Scape: light Y Flagellum: B (apical flagellomere tinged R) entirely R	Y clypeoantennal space (connecting to Y of clypeus)	vertex R with pair yellow spots behind ocelliouter orbits R (Y spots)	i none, but apical margin of median lobe slightly elevated & thickened		basal 2/3 median lobe Y (may be wholly B) Y (apical margin narrowly R)	B Y(ish) - (teeth B)	small tubercle	strongly polished weakly shining	slightly wide	distance along anterior collar; collar declivous anteriorly head broad, eyes strongly divergent below mandibles strongly bent, inner margin
inexpectata	QLD variable in amount of yellow in males	YY	mandibles in both sexes bent, particularly in female	BLACK	yellow variable	Y (median B band) (B mediobasal triangle - vari	able) B (may have Y band) B (may have Y bar	nd) B (may have Y band)				Scape: Y Flagellum: R (darkened apical third)	entirely Y O to nearly level of anterior	√	В	✓ (median tooth prominent)	Υ	✓ 		weakly shining	long wide (moderately convex	with single large tooth mandibles slightly angular about midway wings strongly tinted Y
victrix	only two specimens, both collected long ago Evans questioned association of male (Cairns) & female (Brisbane)	Y	Extensively orange, including much of thorax, legs and antennae gaster orange anteriorly and posteriorly, with black middle segments		EXTENSIVELY ORANGE	0 0	B B	В		2, 5-6 ORANGE 2, 6-7 ORANGE	wholly O	wholly O	ocellus entirely ORANGE	band connecting eyetops entirely ORANGE (except ocellar triangle)	none	lobe; apical margin strongly 4-toothed ✓	ORANGE (extreme apical margin B) ORANGE	ORANGE, with B tips	small tubercle		laterally & dorsally)	eyes strongly divergent below
forficata	rare; known from only 2 females collected in SA	Y	very distinctive, unusual lamina: LARGE, PORRECT with deep U-shaped emargination separating lateral arms Extensively ORANGE (inc much of thorax enclosure B) - gaster uniformly dark orange except T4/S4 B	ORANGE	BLACK	DARK ORANGE DARK ORANGE	DARK ORANGE B	DARK ORANGE DARK O	DRANGE - DAI	ARK ORANGE	ORANGE (except fore & mid coxae darkened at extreme base)	Orange (darker upper surface outer half, except tip)	ORANGE	ORANGE (black band between eye tops)	LARGE, PORRECT with deep U- shaped emargination separating lateral arms each ending in an oblique, flattened & darkened apical surface		ORANGE (lamina R)	ORANGE (R along upper margin, tips B)	small, subangular sti	covered in weak, transverse riae which fade mediobasally (where surface is smooth & polished)	wide	Head quite narrow (nearly as high as wide) Pronotal carinae very strong 328 Pronotum wholly O
MULTIGUTTATA GROUP multiguttata	medium-sized; type A enclosure more or less smooth an or subporrect clypeal lamina (except multiguttata, w meso	nd polished, without complete striae; females with porre- which is subrecumbent); females with simple, rounded opleura	'easily recognised' by polished enclosure which is YELLOW laterally and BLACK	•		Y (B basal third) Y (B mediobasal spot, large	e) B Y	Y MOS	TLY Y - E	BANDED Y	Femora: R, mottled Y (partly darkened)	Connec W. (doublewood upper symfood)		√ + Y narrow outer orbits	subrecumbent, broadly V-shaped emargination with U-shaped media notch		Y	√	✓	shining, weak surface sculpturing	wide, sides convex	OOL only slightly exceeding POL 329
multiguttata listrognatha	extends from Brisbane in south, to Atherton in north.	Y	medially and basally not particularly variable female with porrect lamina; yellow margins on petiole	BLACK	YELLOW	Y, tinged R (B basal half) Y apical half & laterally (Y tin where it meets B) Y margins laterally & posteriorly; rufous R basal 2/3; Y apically	dull Y along narrow	Jargely V (hasally	Y-R dull Y-R	variegated Y & B	Tibiae: R, mottled Y Tarsi: R, mottled Y Femora: R (posterior surfaces darkened) Tibiae: R	Scape: Y (darkened upper surface) Flagellum: pale R (darkened upper surface) Scape: Y Flagellum: R (darkened on upper surface)	 ✓ + WIDER median streak from anterior ocellus to clypeus Y to just above antennal sockets (with B streaks separating inner) 	√	porrect; arising from base of media	evenly convex; margin truncate	√	✓ ✓		shining, weak surface sculpturing	✓ moderately convex dorsally & laterally wide	maculate thorax; clypeus with strong, subangulate median process; OOL much greater than POL; pronotal carinae strong,
listrognatha	Cape York (QLD) to northern NSW (Moree). Rare in collections, so range may be more extensive.	Y ?	male with rufous & black petiole black with complex yellow pattern, including extensively maculate thorax Male scutellum rufous body extensively orange-yellow in female	BLACK	YELLOW EXTENSIVE	rufous (black basal 1/3) R (suffused B anteriorly); small. Y spots posteriorly	, lateral B B	Y (partly suffused R) Y (partly s	suffused R) Y (partly suffused R)		Tarsi: R Femora: fuscous Tibiae: dull R Tarsi: dull R (basitarsi whitish; mid & hind R apically)	Scape: Y beneath; pale R above Flagellum: pale R, darker above		outer orbits narrowly yellow entire head orange; except complex band hetween eye tops (including ocelli and	porrect: much longer than wide, bu	√ t	√ 0-Y	√		shining, but finely striate	√ (strongly convex dorsally) wide	reaching dorsal surface of collar 333 mandibles slender, bent midway;
aurantiaca	Common in southeastern SA and western Vic (e.g. Rainbow, Ouyen). No specimens known from NSW, but a single one from western QLD)	Y	body extensively orange-yellow in female (including entire propodeum) [most have black scutum & mespleura (partly), but some entirely O-Y] male has more black	BLACK	YELLOW-ORANGE EXTENSIVE	orange margins laterally & posteriorly	O-Y B Very narrow, dull very narrow, dull	B (posteriorly O-Y)	-Y O-Y \$2-3·	wholly orange	Femora: O-Y Tibiae: O-Y Tarsi: O-Y (coxae partly darkened)	Scape: Y Flagellum: pale R (outer segments darker above)	yellow to slightly above antennal sockets Y to level of top of antennal	between eye tops (including ocelli and extending to antenane)	strongly curved downward	✓	O-Y yellow, tinged orange reddish-brown; yellow median spot	✓ (O-Y, cf Y)	CO	pasally & laterally (smooth in centre & behind) provex & polished, with some weak sculpturing at extreme sides	wide ✓	pronotal lateral carinae unusually strong 334 pronotal carinae very strong, extending along anterior margin of collar
hackeriana hackeriana	Limited range in eastern Australia. Specimens collected from only five localities: Kangaroo Valley (southern NSW); Torryburn (west of Newcastle, NSW); Tooloom (far north east NSW); Ebor (northern tablelands, NSW); Mt Tamborine (QLD). All locations are in parts of the Dividing Range. Four females collected Mareeba & Mt Molloy	YYY	generally dull coloured clypeus reddish-brown with yellow spot A striking mimic of Ropalidia		YELLOW PRICHT YELLOW	posterior, dull Y band B narrow, apical Y band RRICHT Y /B medially & along	posterior band posterior band B obscure apical brownish band	obscure apical obscur	e apical sh band R ('brownish')	B BRIGHT Y (S2 B	Femora: R (grey/dark basal 1/2 to 2/3) Tibiae: R Tarsi: R Femora: B basally, R apically	R R (upper surface weakly darkened)	Y to level of top of antennal sockets (? connected medially?)	✓ ✓	subporrect; narrow & bifid apically	3 widely spaced, subangulate teeth	above lamella reddish-brown (black tip); yellow spot at base	reddish-brown reddish-brown (with black tips), with small Y spot at base		coarse striae laterally, not reaching midline	slightly long (1.1:1)	OOL much greater than POL 337 pronotal carinae strong, reaching dorsal surface of collar
ropalidiodies OPPOSITA GROUP	male unknown	Y triae radiating from base; females with simple, rounded opleura	mackayensis (a social wasp of north QLD)	BLACK	BRIGHT YELLOW, and R	BRIGHT Y margin) B; O spots posteriolaterally (((varying B; O laterally and	B du	IIR - along	g apical margin)	Femora: B basally, R apically Tibiae: R Tarsi: R (hind partly darkened)	rufous	✓	✓ plus Y streak outer orbits, below	between which is a u-shaped emargination	4 short, rounded teeth medial lobe elevated toward base, with	Y; apex of lamina and surface below = R	V	√ af	ew lateral punctures & short, weak striae	slightly wide	head not strongly developed behind eyes (genae narrower than eyes)
raymenti raymenti	Limited range west of Dividing Range, from southern QLD through central NSW (eg Coonabarabran, Nyngan) to NW Vic (Rainbow), on to Adelaide	Y	black, with gaster extensively orange; T3 partly or wholly black (similar to <i>C. australis</i> , but legs & antennae black) females lack lamina	BLACK	ORANGE ORANGE-BROWN	B; O spots posteriolaterally ((size, sometimes 2/3 segme orange, or very little) B anteriorly; O posterior half (size, sometimes 2/3 segmen orange, or very little)	along apical margin (or wholly B) (varying nt is B O	0		S4-5 suffused O eme sides S5-6	Femora: B Tibiae: B (fore posteriorly pale B) Tarsi: B (fore posteriorly pale B, apically wholly pale B "testaceous") Femora: mid & hind mostly B, apically R	B (basal flagellum pale R)	✓ (narrowly connected across clypeoantennal space)	✓ ✓	no lamina, but none, but pair nipple-like elevation	two acute tubercles below is concave & shiny	B (I think) basal half medial lobe Y	В	y ra	adiating striae (only about 16 arising from base) - surface sculptured between striae above, although fewer striae (~12)	> wide	pronotal carinae strong, reaching dorsal 338 surface of collar
iridis iridis 	Appears to be confined to Cape York	Y	unusual species female lacks lamina largely black gaster, but T1-2 Y overall a dark looking wasp: body black	BLACK	(thorax extensively O-B, some Y)	apical margin)	B B	B (Y band apically) B (Y band	d apically) mostly Y S1	rge pale Y spots 1-2 mostly Y	Femora: B (R apically)	R (grey upper, distally) Scape: Y (tinged R, darkened above) Flagellum: R (darkened upper surface except tip)	Bright Y, with pair black streaks 'through orbits'?	✓ ✓	none, but pair nipple-like elevations near base (surface polished around below these)	truncate median tooth; small tooth each side of lobe	margini)	deep R - B R (Y at extreme base)		but slightly radiating ~10 coarse striae radiating from base	very short & wide (w:l 1.5:1) - sides convex long	enclosure striate 339 5 apical flagellomeres with elongate, polished tyloids beneath, last segment tapered to subacute apex.
opposita opposita	Reasonably common species of southeastern Australia, from Victoria (inc Melbourne & Warburton) to southeastern QLD. Includes NSW & ACT. Not recorded north of Gold Coast (ie Mt Tamborine) Mostly in or near the Dividing Range.	Y	with only limited yellow markings posterior yellow spots/band on T2 (unlike anterior markings of <i>C. antipodes</i>) not a particularly variable species very similar to opposita (but clypeal lamina	BLACK	YELLOW	tinged rufous apically R posterior 1/3, enclosing inter Y band (some) partly or wholly rufous narrow Y-R band posterior (some with >> R)	band)	band) narrow Y-R band narrow Y		В	Tibiae: R (hapically) Tibiae: R (hind darkish) Tarsi: fore & mid R (basitarsus W); hind darkish as above, but hind basitarsus also ringed W	Scape: B, R at apex Flagellum: B above, R beneath	J	✓ ✓	subrecumbent recumbent, arising low on clypeus	V	pale Y (cf Y)	✓ ✓	V	wholly striate; longitudinal, slightly radiating wholly striate; longitudinal, slightly radiating	wide	pronotal carinae strong, reaching dorsal surface of collar; T7 red-brown apically
labeculata labeculata	Always in or east of Dividing Range: north to Kuranda (QLD), south to Brunswick Heads (NSW)	Y Y Y	differs) typically this is a northern species (cf southern range of opposita) but overlap in NE NSW & SE QLD female: Scutellum R (often Y laterally) - cf opposita Petiole R (mostly or wholly) - cf opposita	n D of da								Scape: Y below, R above Flagellum: R (darkened upper surface)			deeply emarginated - sides of emargination forming brownish, round teeth				√			342
AUSTRALIS GROUP euchroma	Very widespread, from Cairns to SA. However, few specimens in collection (including a single male).	which is rather broad apically (but ranging from porrect recumbent); all (except euchroma) type B enclosury Y ? Y Y			YELLOW-ORANGE EXTENSIVE	B (O in some southern populations) BRIGHT Y (posterior may be B darker O)	or R or BRIGHT Y B	BRIGHT Y BRIG	SHTY - BRIG	GHT Y (S4 = B)	wholly bright Y	Scape: Y Flagellum: dull R, suffused grey on apical half	BRIGHT yellow to ocelli (few black streaks above antennae)	all genae & occiput BRIGHT yellow	subrecumbent, interrupted medially OR subporrect with narrow apex (esp in southern populations)		BRIGHT yellow (lateral apex lamina rufous)	√	2 prominent ridges/ folds ("rugae")	polished, minutely punctate	wide	343
euchroma xanthura	Broad range from near coastal QLD (Cape York to Brisbane), then	YYY	(except black band across vertex), & entire gaster (except T4/S4) gaster largely orange-yellow, T2 half	BLACK	YELLOW &	orange over posterior half & laterally O (stained Y anteriorly) - varies entirely O, rarely partly or wh	(B in type specimen) B s, some olly B B	O-Y (pyg		S2 = 0 r 0; except S1 & S4 B	wholly O (base of coxae B) Femora: O Tibiae: O Tarsi: O (coxae black basally)	entirely R (grey on upper surface, distally)	yellow, including clypeoantennal	genae broadly O-Y genae very broadly O-Y, plus spots on vertex (narrowly connected medially)	porrect, arising from base of lamin and nearly perpendicular	strongly convex with 3 broad, rounded teeth	✓ (also lamina edged R)	brownish with yellow spot at base largely Y		weakly shining, minutely granulate		pronotal carinae unusually strong, extending along dorsal collar (partially); only 1 male specimen studied propodeum 2 large orange spots laterally 345
xanthura gilberti	Widespread but not well-represented in collections. Locations		female with porrect lamina; venter largely orange		ORANGE	B basally Y, orange-brown over half & extreme sides B O-Y basal half; B apical h	BNIGHT T	BRIGHT Y (occasionally broadly B basally) Y (suffused R & B mediobasally)	ally broadly BRIGHT Y Sa	62-3 orange ely O (S4 black)	Femora: O-Y (basally B; hind with B streaks) Tibiae: O-Y Tarsi: O-Y (hind B, except at base) (coxae & trochanters B) Femora: R Tibiae: R (suffused Y) Tarsi: R (suffused Y)	Scape: Y Flagellum: pale R (grey upper surface) Scape: Y	Y to well above antennal sockets (with some black marks below antennae)	large Y spots upper outer orbit	porrect; short (wider than long) arising from base of median lobe	✓	√ (apex lamina rufous)	✓ ✓		shining, minutely granulate surface dull, short striae at base	slightly long > wide , sides weakly convex	propodeum 2 small O-Y spots laterally
gilberti australis	include: Bundaberg (QLD); far north coast NSW; Moree (NSW); Mooroopna (central Vic); West Beach (Adelaide, SA). Also possibly WA. Abundant species throughout Vic, NSW, ACT, and QLD to Cape York. Also common in southeast SA. Most records are from areas of	Y Y Y Y Y Y	male T3 yellow (black triangle) (similar to minuscula, but petiole black) gaster almost smooth male appears orange with a band of	BLACK	YELLOW YELLOW-ORANGE	B basal Y band, stopping well stateral margins B (frequently partly Y) O-Y	mediobasally)	B O-Y (very narrowly B basally) O-Y (very basally)	narrowly B - S2 =	rest venter mostly B)	Variegated Y & R Femora: hind B; mid spotted B basally Femora: pale R (coxae B) Tibiae: pale R Tarsi: R (fore & mid stained W)	Flagellum: grey-brown, darkened above (extreme tip paler) Scape: Y (darkened upper surface)	Y, including subantennal space (variable)	outer orbits broadly yellow (variable)	recumbent; incomplete medially; pa	ir .	✓ ✓	✓ ✓		surface dull, short striae at base ull, a few punctures & lateral striae	considerably wide, moderately convex sides	head broad, OOL greatly exceeding POL, eyes rather strongly divergent below
australis venusta	moderate rainfall, but some also from arid areas (e.g. Broken Hill). Appears to favour open country (eg roadsides; woodland clearings) known only from females Brisbane, plus one possible example from Mt Isa	Y ?	black (T3); legs largely yellow in males (orange-yellow in females) may be confused with <i>goddardi</i> or antipodes may even fall within antipodes, ultimately	BLACK	VELLOW/mottled/		B (or mostly B) O-Y (B basally) B (small Y lateral spots) Y (B at extreme base)		largely band	= O; S6-7 = O (mostly) y R (narrow black nds & limited Y	variegated Y & R hind femora & tibiae streaked B above	Flagellum: O-R (partly darkened upper surface) Scape: Y Flagellum: R (darkened on upper surface)	Y, including subantennal space, inner and upper-outer orbits	 ✓ - outer orbits narrowly Y, extending backwards opposite eye tops 	subrecumbent, margin very slightl curved laterad of notch (not strongl		" Y (apical margin lamina R)	✓ ✓		dull, a few punctures & lateral striae	long slightly long	head broad, eyes divergent below 350
goddardi	Common wasp in QLD but apparently confined to dividing range and eastward to coast, from the southeast corner to Cape York. Rare in NSW, except in extreme NE corner (e.g. Mullumbimby)	v v	it is not possible to reliably separate venusta from the more extensively patterned antipodes of eastern QLD Yellow & black petiole; T3 black; T2 with distinctive marking Female with very broad head, OOL	BLACK	YELLOW	Y (except B basally) - some with rufous B (Y band just before postermargin, extending to include margins - variable, and may hareas also)		B (broader Y apically) Y (pygidia		blotching) I-2 Y (mostly) narrow Y bands	Femora: dark basally; R apical fifth Tibiae: R	dull R below; darker above (except apical	lower inner orbits narrowly Y	✓ (pair on upper & lower orbits, & vertex)	subrecumbent, broadly incomplet medially each side curved mesa & upward (from above, appears to be a pair of small teeth)	t de la companya de l	√ (also lamina edged B) & B mediobasally (rarely clypeus is wholly black)	√		ull, a few punctures & short, basal striae	✓	apical clypeal margin truncate medially, dentate opposite lateral margins of lamina + pair of small teeth mesad of these 351 head broad
goddardi eungella	Note similarity to venusta		greatly exceeding POL and distinctive clypeus A variable species male: T2 has anterior spots (similar to C. antipodes), but note the difference in scape		TEELOW .	Y (except B basally) Y (B mediobasally & along of apical margin) - variable, as in B O-R (B extreme base)	female O-R broad band th		Y apically) Y & R (B basal spot) S3-5 r	I-2 Y (mostly) narrow Y bands	Tarsi: R	Scape: O-R Flagellum: B (extreme tip pale)	✓ - varies WHITE (cf Y)	B or with spots	subrecumbent		✓ (B tentorial pits) BLACK with lateral WHITE spots & white lamina (except apex & base)			ull, a few punctures & short, basal striae Il (due to minute sculpturing), indistinct basal striae	slightly long wide	neau broau
eungella siccata	Broad range from near coast of central QLD to southern NSW (Conargo, ie mid west), and west to Alice Springs. Confined to arid country from western NSW (eg Broken Hill) & NW	Y	colour. facial marking white (rather than yellow) small; extensively orange-brown or		ORANGE-BROWN	B R (B extreme base) with Y significant anterodorsally O-R O-R	black basally) O-R (may be part)	Y (narrowly banded black basally) Y (narrowly banded black look look look look look look look lo	basally) B	B venter O-R	B (fore legs R beyond basal 2/3 femora; mid legs R at femorotibial joint & basitarsus W) entirely yellow-brown	Scape: Y Flagellum: grey-brown, darkened above (extreme tip pale) Scape: straw	yellow to antennal sockets, grading to O-R above sockets (complex B blotch above ocelli -	✓ genae & occiput pale O-R	recumbent	✓	WHITE (broadly margined black) dark amber (medially B)	brownish ("fuscoferruginous") (straw, cf Y) (lamina also B edged)		several strong punctures moderately shining with fine sculpturing	slightly long	propodeum varies: entirely orange-brown, entirely B, or a combination
siccata antipodes	Vic (eg. Rainbow), to around Alice Springs Common and widespread in southeastern Australia, including: QLD (Bundaberg region, Cunnamulla); NSW (widespread); ACT; Vic (widespread); SA (including Kangaroo Island.	Y	lateral yellow spots on anterior slope of T2, often medially joined in male		FALILIN	varies wholly O to wholly B, or combination O-R (large yellow area mediob (some black posteriorly eg B (in northern populations, may be partly or wholly Y) O-R (B at extreme base & me (may be wholly B in southern pair Y spots anterolatera)	vici) also) edially) pops); B (narrowly Y apically) - B (broader Y apically yarios)	O-R anteriorly; transverse Y posteriorly (may have hlack) Y (may y) - B (broader Y apically)	y be B) dusky H if	O-R (or mostly B, f dorsum B)	(as above, but coxae partly R) Femora: B basally; R apically Tibiae: R Tarsi: R	Flagellum: pale R (darker upper) brown-grey above; paler R below apical segment entirely pale R	straw to slightly above sockets	✓ ✓	recumbent	✓	straw ✓ (black spots in tentorial pits) (more broadly black in southern pops)	✓ (pale Y)	√	shining, with very weak sculpturing weakly shining	slightly wide ✓	apical clypeal margin 5-toothed (median tooth small)
antipodes calida	Range includes coastal areas, but in NSW, ACT, & Vic, seems especially abundant at moderate elevations. Common in north QLD, from Innisfail northward; particularly around		a particularly variable species (in colour & size) Very small with some colour variation BUT scutal markings consistent and unlike any other Australian species	, , , , , , , , , , , , , , , , , , ,	Extensively marked	B (in northern populations, may be partly or wholly Y) O-R; large yellow spots anterolaterally (confluent in so populations); B at extreme by the populations of the	outhern pase B (very narrowly Y or pale Y in souther populations) V (parrowly bonds	B (broader Y apically; or pale Y in southern populations) B (broader or pale Y in southern populations) Y (narrowly banded black basally) Y (pygidian)	n southern ations) O-Y varie (narro	me Y S5-6, based on images) iegated O & Y ow transverse B bands)	as above, but hind tibia & tarsi darkened; fore & mid basitarsi infused W Femora: Y (hind R, mid tinged R) Tibiae: Y (hind R; mid tinged R) Tarsi: Y (hind R; mid tinged R)	as above, but scape with Y spot in front Scape: Y	entirely Y head, except B band c	connecting eyetops (inc ocelli), extending	recumbent	√	Y; narrowly amber along apical margin and lamina margin	testaceous (black at base & apex)		weakly shining micropunctate, with some larger punctures laterally	long very slightly W	Y = scutellum; metanotum; mespleura; propodeum (exp narrow B basally) B = metapleura (mostly)
calida ARMIGERA GROUP	small-sized, none of them common; no clypeal lamina ; a with simple, rour	all except osculata have 1 or 2 spines on clypeus; female anded mesopleura	mesoscutum with pair broad, longitudinal yellow steaks (female also has yellow on extreme sides)	BEAGIX	Y	R (largely) Y anterior half; O behin	d Y (basal black band) Y (basal black bar	Y (basal black band) Y (basal b	lack band) Y ? peri	rhaps as female	as female, except hind tarsi darkened; also some darkening of hind tibiae & posterior, basal parts of femora	Flagellum: dull R, suffused grey on apical half	downward as pair of	f streaks to antennal sockets		√	и	✓		micropunctate, with some larger punctures laterally	long & slender (1.5x long as wide)	B = propodeal enclosure
armigera	From near coastal QLD (Rockhampton to Brisbane), then inland through arid NSW & southern QLD to SA (eg Flinders Ranges)	Y	Distinctive species showing little variation Female: unusually broad head and distinctive, spinose clypeus T2 patterned black, orange-brown & white; expands abruptly beyond petiole, and is	BLACK	WHITE & ORANGE- BROWN			spots laterally grey ("fi	uscous") ("	ter largely grey ("fuscous")	Coxae, trochanters & entire hind legs: fuscous Fore & mid legs: rufotestaceous (femora partly stained fuscous) Tibiae: stained yellowish basally & apically Basitarsi: W	Scape: W below; pale R above Flagellum: pale R below; grey above	√ (but W, not Y) √ (but pale Y) & spot in	✓	no lamina, but	unusual clypeus. Very broad, low, with 2 prominent, porrect processes arising near base of median lobe; anterior to these is declivous & pubescent	W basally (median & lateral lobes) light Y basally; apex broadly black	basally (B at tips)	✓	coarse sculpturing	wide slightly long	mandible slightly angled at mid point head unusually broad 360 T2 expands abruptly beyond petiole T2 expands abruptly beyond petiole
osculata	known from only a few specimens collected in Cunnamulla & Nappa	V	much wider than petiole complex colouration on T2	BLACK	IVORY & Yellowish	pale R apical 1/4 B; pale Y band anterodorsa narrowly bordered R	pale Y (mostly), stained	pale Y pygidiu	aterally;	i large, pale spots	coxae & trochanters B Femora: R (hind mostly B; fore & mid may be also) Tibiae: W (ish), tinged R (esp posteriorly)(hind B streak behind; may be fore & mid also) Tarsi: W (ish)	Scape: I (tinged R above) Flagellum: B (basal segments pale R beneath; tip	IVORY (cf Y), including spot on ridge	√ (may also have oblique spots of vertex)	none	but abruptly declivous apically over about a 70 degree angle for most of its (wide) width bearing long, stiff setae; clypeal margin broadly truncate, edentate	& densely silvery-pubescent I basal half; B apical half	apex) B-R, suffused pale R basally	mi	moderately shining,	wide, convex laterally	mandible with single, large tooth on inner margin, well back from apex 361 Clypeus wide; head broad
osculata darrensis	Merrie, QLD		complex colouration on 12	BLACK	IVOITI & TellOWISIT	pale R apical 1/5 B; pale Y band anterodorsa narrowly bordered R dull R apical margin suffused dull R basally	dull R (irregularly	B ive	ory largely R S3 la	largely whitish	Tarsi: W to light Y (limited darkening) Fuscous (grey) basally Femora: grey (R apically)	Scape: I Flagellum: dark brown, black above (except tip) Scape: I below, pale B (testaceous) above Flagellum: testaceous (darkened above except	Ivory to just above sockets ✓ BUT IVORY, not Y	not spotted outer orbits with small IVORY spot	porrect, spinose process in centrof median lobe; median carina the					micropunctate, with some	√ wide	363
darrensis	rare in collection, only definitively known from Brisbane; assignation of males collected in western NSW tentativel ID	Y Y?	Black with irregular dull R or ivory markings	BLACK	IVORY & RUFOUS	✓ B (may be suffused dull F)	(may be wholly bright R)	B with dull Y along apical margin largely	v dull Y largely dull Y large	B ely R (S3 & 5 W	Tibiae: pale brown, streaked R Tarsi: fore & mid pale brown, whitish basally: Fuscous to apices of femora, otherwise YELLOW streaked with brown Hind tarsi mostly fuscous	pale tip) Scape: light Y (somewhat rufous above) Flagellum: dark brown (darker above)	✓ BUT IVORY, not Y	√	extends to apical margin of lamin	√	pits, & tip of lamina) IVORY (broadly B on lateral lobes - extent varies)	apically "fuscoferruginous"		mall, shining, micropunctate	V	mandible abruptly bent at 0.6 from base; thoracic dorsum & propodeal slope with unusually large, subcontiguous punctures, interspaces shining head broad, eyes strongly divergent below
unispinosa unispinosa	Range apparently limited to Brisbane and Tamborine (Gold Coast hinterland) (rare in collections)	Y	FEMALE: gaster White & Rufous, T4/S4 BLACK; legs variegated MALE: gaster mostly Yellow, T4 BLACK; legs Yellow	BLACK	FEMALE: complex pattern WHITE, PALE YELLOW & Rufous	✓ R basal half, encircling white which doesn't reach lateral m ✓ (suffused Y-R apically) Broad Y band basomedially, R		W (small B area basiomedially) Y apical band Y (narrow black I	R band - (S1 a	bands) S4 B & S5 partly B) B	Variegated W & pale R (coxae and hind legs partly darkened) Femora: Y (partly R) Tibiae: Y (hind partly R) Tarsi:Y	Scape: light Y Flagellum: pale R (slightly darkened on upper surface) Scape: Y Flagellum: pale R (slightly darkened on upper surface except tip)	sockets	genae suffused light Y to R; vertex with paired light Y spots outer orbits streaked Y	d none, but with dark, rounded toot medially	median tooth most prominent	WHITE (narrowly black apically)	WHITE with black tips Y basally, R apical half		micropunctate, with a few larger punctures laterally micropunctate, with a few larger punctures laterally	√ slightly long	head strongly developed behind eyes (genae wider than eyes) front of head rather broad
cunnamulla cunnamulla	Arid country: Central Australia, WA, inland QLD, western NSW (inc Broken HIII; Cobar) & SA (Lake Eyre)	Y	extensively ORANGE species; T4/S4 black (see also luculenta, below) males are difficult to distinguish from xanthura	ORANGE	BLACK	O (some with B posteriorly, es and Y rather than O) O (small amount black anteriorly) Y anterriorly; O posterior	O (paler than 12)	O (paler than T2) O (tip date of the date	BRIGHT Y S1-	S4 = B -3 & S6-7 OR	ORANGE (except fore & mid coxae basally B) ORANGE-YELLOW (except fore coxae largely B)	Orange (darker upper surface outer half, except extreme tips) Scape: Y Flagellum: R ("castaneous"), darker on upper surface outer half, except tip	OHANGE	Orange (complex black band between eyetops, inc ocelli) - may be reduced B, esp SA large orange spot upper genae, extended along occiput to near midline		small, recumbent spinose process on midliine close to & overhanging broad apical margin of clypeus (teeth prominent, rounded)	Y	√	•	granulate granulate shining, micropunctate, few larger, lateral punctures	√ slightly long	propodeum O, except enclosure B; eyes strongly divergent below Mandible with large, angular tooth set well back from apex sides propodeum suffused dull O
luculenta MINUSCULA	rare; type Bourke NSW is the only example very small; all have similar colour pattern (T2 spotted often with dark spot anteromedially); type B enclosure,	Υ	strikingly similar to <i>cunnamulla</i> , b ut clypeus is different	ORANGE	BLACK										no lamina, but	subporrect tubercle (or strongly tapered lamina) at centre of median lobe; space below is declivous but not notably concave						363
MINUSCULA GROUP minuscula		mina, truncate or emarginate apically (except exleyae).		BLACK	YELLOW	rufous B posteriorly; R anteriorly (r include Y patch/band)	B mediobasally)	pale Y (most are broadly B mediobasally)		S6 = R	Femora: fore & mid basally B, otherwise R; hind B Tibiae: fore & mid W (partly); hind darkish Tarsi: fore & mid basally W; hind darkish	Scape: W beneath ; R above Flagellum: R (darkened above)	WHITE (cf Y) Y to level of top of antennal	√	recumbent, apical margin weakly concave, nearly as wide as total width of median lobe	truncate with strong tooth each side of lamina a	WHITE (narrowly black apically)	WHITE with black tips	√ im	egularly sculpted & punctate	wide (1.2:1)	eyes much wider than genae 368
minuscula anthicivora	see also windorum		some variation in extent of pale markings on gaster (and in WA, the bands are reddish-orange) petiole red	BLACK	complex pattern of WHITE & rufous		` B	Y (basally banded B); variable W (narrowly R & B basally)	able H 53 k	lateral Y spots	as above, but fore & mid tarsi wholly Y Variegated B & R, plus: Tibiae: anterior face W Tarsi: fore & mid largely W	Scape: W, pale R above Flagellum: pale R below, B above except apical segment	Y to level of top of antennal sockets, including subantennal space W to well above sockets (inc clypeoantennal space & ridge)	√	recumbent, gradually narrowed to a arcuately emarginate apex	n with small, truncate median lobe and small tooth just laterad of each margin of lamina	WHITE (narrowly black apically)	basally. Y WHITE with red-black tips	irr	egularly sculpted & punctate	slightly long	head just wider than long; eyes slightly divergent above; eyes much wider than genae
anthicivora	mostly Northern Territory and far west QLD	Y	complex pattern on thorax, including large areas rufous; metanotum white Easily confused with minuscula EXCEPT the clypeus is distinctive, and the petiole	T e		rufous largely B, with W-Y area ante	pale f (broadly h	B (Y band apically) B (Y band B (light Y apical band,	B, irre	lateral Y spots	coxae mostly B; trochanters light Y Femora: fore & mid = R basally, light Y apically; hind = B Tibiae: fore & mid = R basally, light Y apically (apices R); hind = B, streaked light Y Tarsi: variegated Femora: B, stained R (apex of fore & mid W) Tibiae: B, stained R (posterior surface W)	Scape: Y Flagellum: pale R (slightly darkened above) Scape: pale R; Y in front	Y to well above antennal sockets WHITE (cf Y)		recumbent, sides approaching to			D bossi bolf D spically		eakly shining, a few indistinct	convergent behind wide, convex dorsally &	eyes more strongly divergent above than below
windorum	Widely distributed in QLD, typically in coastal or near-coastal areas (but also seen in Roma, Cunnamulla, etc). Also in north eastern (including Red Rock NP), central NSW (Coobabarabran, Nyngan) & SW NSW (Balranald).	Y Y Y Y ?	the clypeus is distinctive, and the petiole (in males, & sometimes females) is BLACK. Legs also differ in colour * Evans 1971 on biology misidentified this species as minuscula	BLACK	WHITE, pale YELLOW, & ORANGE-BROWN	(occasionally partly or wholly B) B (often rimmed or suffused R) B; W band mediobasally, not reaching sides	rufous) Pale Y (bloadly h anterodorsally) Provided B Y; dark R band mediobasally, not nearly reaching sides B	Y (B medibasally) Y (B medibasally)		egularly blotched dull R	Tibiae: B, stained R (posterior surface W) Tarsi: B, stained R Femora: Y (hind largely B) Tibiae: Y (hind streaked B) Tarsi: Y (hind mainly B) Femora: Y (hind R)	Flagellum: pale R (darkened on upper surface) Scape: Y Flagellum: R (darkened on upper surface)	WHITE (cf Y) WHITE to just above antennal sockets	✓ ✓	recumbent, sides approaching to a narrow, truncate apex	lamina and a weak tooth just mesad of these	Iamina [may be wholly W or wholly B] WHITE (narrowly black apically)	R basal half, B apically	V	punctures & striae eakly shining, a few indistinct punctures & striae	laterally ✓ convex dorsally & laterally	front of face narrow, with eyes diverging strongly above & below
praedura praedura	Especially common on Cape York; also found as far south as Mackay QLD	Y	somewhat similar to <i>miniscula</i> , but petiole black	BLACK	YELLOW	B (suffused Y-R apically) Y basal half; B apical half B Y basal half; B apical half	V (except black area	B (suffused Y apically) B (R a		B 2-3 Y (in part)	Tibiae: Y (tips darkened) Tarsi: Y (somewhat darkened) Femora: bright Y (hind partly R)	Scape: Y Flagellum: pale R below, darker above Scape: Y Flagellum: R (slightly darkened on upper surface)	entirely Y Y to slightly above antennal sockets	✓ ✓	recumbent	4 rounded teeth ✓ (teeth B)	Y (?)	✓ ✓		ome large punctures laterally	long (sides near parallel, seen from above) long sides weakly convex	372
spilota spilota	Just a few specimens, from western NSW & 1 central SA.	Y	females distinctive; largely black, with limited white markings males very similar to windorum & trifida - colour of T2, plus shape & colour of petiole can be used to separate the species.	BLACK	WHITE LIMITED	B small, indistinct W spots on a face B a pale Y spot mediobasal	nale V (vone parrough P	pale Y with triangular pale Y with	reas B S3 pa	ale vellow band	BLACK, except tibiae streaked W on outer surface BLACK basally: LIGHT YELLOW beyond beyond basal half of femora except: hind coxae tipped white; hind femora mostly black; hind tarsi darkened	Scape: B Flagellum: pale testaceous below, grey above except tip Scape: Y, testaceous upper surface Flagellum: pale testaceous, weakly darkened upper outer surface	√ (but W, not Y) light yellow to slightly above sockets, inc clypeoantennal space space √ (but W, not Y) light yellow to slightly above sockets, inc clypeoantennal space √ (but W, not Y) light yellow to slightly above sockets, inc clypeoantennal space √ (but W, not Y) light yellow to slightly above sockets, inc clypeoantennal space √ (but W, not Y) light yellow to slightly above sockets, inc clypeoantennal space √ (but W, not Y) light yellow to slightly above sockets, inc clypeoantennal space √ (but W, not Y) (but W, not Y)	✓ ✓	recumbent	√	B (I think) ✓ (light yellow)	grey-red-brown (whitish at base) whitish, red-grey on apical half		weakly shining, micropunctuate, a few incomplete basal striae weakly shining, micropunctuate, a few incomplete basal striae	>> wide	wings "wholly light fumous" tergites moderately shining
trifida trifida	Restricted to arid parts of NSW, SW QLD, NW Vic & central Aus	Y	little variation black with WHITE markings	BLACK	WHITE	narrowly R posteriorly transverse W area anteriorly, no surrounded R B light Y transversely medioba	surrounded R)	WHITE (but B anteromedially) R (m		nsversely whitish	as above, but: fore & mid femora with some light Y apically fore & mid tibia wholly light Y	Scape: light Y Flagellum: testaceous, darkened upper surface	✓ but W (not Y) light Y to just above sockets	upper genae small W spot	recumbent, with 3 teeth (inc 2 large lateral teeth)		W (dark tentorial pits; apex lamina B) light Y (extreme apex medial lobe B)	W (darkened at tip)		weakly shining with several punctures weakly shining with several punctures	wide	375
exleyae	Collected in Longreach and, originally, on a homestead in the dry interior of NSW	Y	females distinctive - unusual clypeus & carinate mesopleura	BLACK	complex pattern WHITE (some rufous/yellow)	B (R apically; R suffused medianly) R (median pale Y spot anterior median black area posterior median black area	orly & light Y (with B triangle mediobasally)	light Y R (E	3 tip) -	В	hind tarsi only weakly fuscous Femora: pale R Tibiae: whitish (pale R posterior surface) Tarsi: whitish (coxae darkened)	Scape: pale R (whitish beneath) Flagellum: pale R (darker above, except tip)	W (inc clypeoantennal space & ridge)	genae with large pale R spot extending mesad along occiput; vertex also with spots	none	but with an oblique, flattened area on apical third of median lobe, with weak tooth at upper margin of flattened area; clypeal margin dentate laterally, broadly truncate	WHITE (narrowly black apically)	whitish (B apically)	well defined, vertical carina for most of its height	dull alutaceous	long	genae strongly developed much wider than eyes; T2 broadly expanded from petiole
exleyae other					. arous/yellow)	B (R along posterior margin) R (transverse light Y spontanteromedially, flanked R extend as dorsolateral strip posteriorly; posterior half	pes light Y (B mediobasally) B	B (light Y apical band) du	II Y dull Y S3 p	pale Y laterally	as above but hind femora & tibia mostly B			only very small spots; vertex unmarked	porrect svini	s	W, with large B border on both median & lateral lobes	dark R-B		dull alutaceous		
latibertis latibertis	Far north QLD, south to Mareeba (particularly Port Douglas) Evans 1988	Y	female clypeus porrect (similar to xanthura) - and Evans (1988) argues that there is no case for separating the species so latibertis has priority	BLACK	YELLOW, ORANGE or RUFOUS BRIGHT YELLOW	в; apicai margin O		O (may be B) O (darker or may Y (may be partly or wholly B)	be all B	and parts S5-6 Orange	Femora: Y (may be suffused R) (mid & hind may be partly B) Tibiae: Y	Scape: Y Flagellum: Y-R (darkened above) - variable, esp ir males	Y to just above antennal sockets, above to vertex Y to above antennal sockets	large spots on genae small spots on genae - variable	porrect, arising from base of clyper and nearly perpendicular; apically deeply emarginate, lateral margins curved downwards (similar to Xanthura)		Y; apical margin of lamina darkened Y (apical teeth B)	Y, reddish on apical third	√	weakly shining, alutaceous, short basal ridges & small, transverse ridges apically moderately shining, cropunctate with some short, lateral striae	wide	head wide; OOL 1.4X POL Evans 1988 p1
storyei	first described in Evans 1988 Collected in Mareeba (only known location, where it is common in open woodlands)	Y	very similar to unispinosa (in clypeus): However, females clearly distinguished by mesopleura shape, slender petiole, and colour of legs, head and gaster. female head very wide and largely Y, with	BLACK	YELLOW & Rufous	light R B (Y basal third)	Y B	Y (pygidial		B, others R-B	Tiblae: Y Tarsi: Y (hind slightly darkened) BRIGHT Y-R	Scape: Y Flagellum: pale R (darkened above 3-9)	YELLOW to well above antennal sockets	transverse B streak between eye tops, with paired extensions to antennal sockets and median streak to top of vertex - vertex otherwise R (with pair Y spots); genae broadly Y-R		[clypeus very short & broad]	Y with B median tooth	Y, black teeth	strongly swollen, the most prominent part with parallel carinae	lateral striae noderately shining, minutely granulate	✓	Head very broad, widest across bottom third of eyes (OOL 2.4x POL; genae 1.8x eyes) Clypeus very short & broad Mandibles quite straight, with single strong tooth on inner margin
storyei	species not covered by Evans 1981 or 1988		female head very wide and largely Y, with complex B pattern very little variation in colour			B (extreme apical margin Y) - occasionally R B (Y basal third)	У В	Y	Y (suffused R s4B; c apically) som	others largely B, ne Y markings	Y (femora partly suffused R; occasionally darkened)	Scape: Y Flagellum: R (darkened pedicel & upper surface)	antennal sockets	upper frons & vertex B (except paired spots behind ocelli); genae broadly YELLOW	S	median tooth most prominent almost semicircular, but broader at apex	✓ (only median lobe trimmed B)	✓		somewhat swollen, shining, very finely micropunctate	long	
gilesi gilesi	Type collected in Claremont (WA);	WA	bright reddish-orange	BLACK	Orange-red	O-R O-R O-R	B B	O-R O	-R O-R	-2 bright O-R	bright O-R	Scape: bright O-R Flagellum: O-R below, darker above	bright reddish orange to antennal sockets, narrowly separated from interantennal carina Y (rather than bright O-R)		suberect, angularly emarginate	almost semicircular, but broader at apex than long; broadly but shallowly emarginate at apex, the angles produced into very short, blunt teeth, with another more acute tooth on each side beyond emargination	O-R Y (rather than bright O-R)	O-R	√ m	elicately punctate, striate at corners; almost smooth in hiddle and at apex & divided by a deep, longitudinal sulcus	wide (nearly 2x length)	bright O-R: prontotum (interrupted in middle); tegulae, scutellum, post-scutellum entirely body coarsely & closely puntured Turner 1910 (& Fig 13) & 1912
merredinensis						O-R O-R	ВВВ	В	В		reddish-rusty	Scape: R Flagellum: B				truncate apex, apical portion obliquely depressed	lateral spots R	В	obscurely tuberculate	smooth	probably wide (Latin is odd, as for gilesi)	Reddish-rusty: upper half mesopleura; scutellum; metanotum; propodeum eyes parallel; anterior angles of pronotum prominent in female (much more than in perkinsi)
merredinensis	Type from Merredin (WA)	WA	mimics Paralastor of WA	BLACK	Reddish-rusty	O-R O-R	ВВВ	В	В			Scape: R Flagellum R below (dark above)					R (basal & apical bands B)	B?	b	pasal area strongly obliquely striated		female clypeus like perkinsi from Cairns, although raised basal portion less elevated & not excised medially (and colour differences very great) colour pattern resembles some WA Paralastor species
dedariensis	Type from Coolgardie (WA)	WA	female: head very large (wider than thorax); large, porrect lamina large, robust species	BLACK	dark, with rusty markings	basally & laterally R basally R	ВВВ	В							large, strong, porrect, quadrate lamina arising from base of clypeus	apical margin (of median lobe or of lamina?) very widely & deeply emarginate	B?	B?	S	mooth, polished, divided by longitudinal groove	wide (at least 2x length)	eyes strongly divergent below clypeus form most like auranticus, but lamina much more quadrate & the form of apical margin is also different
cucullata		NT																				