



3. T-III postpit area purple in contrast to green or blue-green at middle of pre-pit prepit area, scapal basin sloping gradually toward TFC . . . . . *simulans* Mocsary  
 T-III postpit and prepit areas grading gradually in color, scapal basin ending above in a roughly projecting area beneath TFC. . . . . .4
4. T-III tooth row median emargination almost a half circle, pit row moderately impressed in lateral view. . . . . *saginata* Linsenmaier  
 T-III tooth row median emargination much less than a half circle (fig. 12), pit row weakly impressed in lateral view. . . . . .5
5. F-I 2.3 (male) to 2.5 (female) x as long as broad, propodeal projection strongly lobed behind, gonostyle broadly rounded. . . *interceptor* F. Smith  
 F-I 2.0 or less (male) to 2.3 or less (female) x breadth, propodeal projection various, gonostyle stoutly pointed distally (fig. 15c). . . . . .6
6. Propodeal projection strongly lobed toward middle of posterior margin, T-III medial punctation about as coarse as that toward apex of T-II, cuspis moderately rounded distally (as in fig. 14b). . . . . *perplexa* Buysson  
 Propodeal projection not strongly lobed but curved forward near apex (fig. 11), T-III medial punctation much finer than that toward apex of T-II, cuspis broadly rounded distally (fig. 15b). . . . . *ausae* Bohart
7. Mesopleuron distinctly toothed. . . . . 8  
 Mesopleuron not distinctly toothed. . . . . 9
8. Mesopleuron tridentate, preocellar area not well defined by carinae, pit row separated medially by a knife-edged carina, T-II median ridge strong . . . . . *fossulata* F. Smith  
 Mesopleuron bidentate, preocellar area well defined by carinae, pit row not separated by a knife-edged carina medially, T-II without a strongly raised median ridge. . . . . *fuscipennis* Brulle
9. Metanotum unusually bulging or projecting in lateral view (figs. 2, 4). . . .10  
 Metanotum broadly rounded in lateral view (fig. 1). . . . . .11
10. Metanotum bulging in lateral view (fig. 2), F-I about 3x as broad as long . . . . . *impostor* Mocsary  
 Metanotum with a strong toothlike projection in lateral view (fig. 4), F-I 2.5x as broad as long or a little less. . . . . *notidana* Bohart
11. T-II microreticulate subapically, dull; pit row not depressed medially in lateral view, propodeal projection unusually short . . . *norsemanae* Bohart  
 T-II polished subapically between punctures; pit row depressed medially in lateral view, propodeal projection large (fig. 10). . . . *australis* Bohart
12. Propodeal projection with posterior margin straight or a little concave as viewed from above and slightly behind. . . . . .13  
 Propodeal projection convex or convexly lobed along posterior margin as viewed from above and slightly behind. . . . . 15
13. T-II punctures along midline separated by considerable polished areas, metanotum a little depressed medially, female F-I nearly 3x as long as broad . . . . . *crisovallensis* Montrouzier  
 T-II punctures along midline close and without unusual polished areas, metanotum not depressed medially, female F-I 2x as long as broad or a little shorter. . . . . .14
14. T-III second pair of teeth much sharper than middle pair. . *tasmaniaca* Mocsary  
 T-III second pair of teeth nearly as sharp as middle pair . . . . .  
 . . . . . *yallingupia* (Linsenmaier)

15. Mesopleuron with 1-3 projections or teeth, and/or metanotal projections. . . 16  
 Mesopleuron without distinct projections or teeth. . . . . 18
16. T-III with 7 teeth, median one small; metanotum medially depressed but not strongly projecting; mesopleuron bidentate. . . . . *festina* F. Smith  
 T-III with 6 teeth, metanotum with one or two definite projections, mesopleuron various . . . . . 17
17. Mesopleuron with a massive downward projection, T-III outer pair of teeth small and halfway from base to middle pair, F-I about as long as broad in both sexes, T-III strongly saddled (view laterally). . . . . *lincea* Fabricius  
 Mesopleuron with 2 obtuse denticles, T-III teeth all posterior, F-I in female (male unknown) 2x long as broad, T-III hardly saddled. . . . . *xysa* Bohart
18. Abdominal terga with considerable coppery or reddish areas. . . . . 19  
 Abdominal terga green to purple, rarely with coppery tinges. . . . . 20
19. T-II with a pair of round coppery spots on a blue-green background; T-III distinctly swollen before pit row, blue-green to purple. . . . . *schiodtei* Dahlbom  
 T-II-III green and extensively coppery, especially on T-III; latter hardly swollen before pit row. . . . . *bipartita* F. Smith
20. Females, F-I 2x as long as broad or more. . . . . 21  
 Males, F-I often 1.6x as long as broad or less. . . . . 25
21. T-III tooth row with median emargination shallow, about as deep and broad an arc as lateral one; T-III prepit area not strongly bulged medially. . . 22  
 T-III tooth row with median emargination moderately deep, its arc narrower and/or deeper than lateral one; T-III prepit medial bulge various. . . . . 23
22. F-I about 2.8x as long as broad. . . . . *agilis* F. Smith  
 F-I about 2.0x as long as broad. . . . . *zylia* Bohart
23. T-III prepit bulge low, not prominent medially . . . . . *perthensis* (Linsenmaier)  
 T-III prepit bulge moderate, stronger medially. . . . . 24
24. Malar space 2.0 MOD or a little more. . . . . *sollicita* Mocsary  
 Malar space 1.5 MOD or a little less. . . . . *intrudens* F. Smith
25. F-I length more than 2x breadth, longer than F-II . . . . . *agilis* F. Smith  
 F-I length less than 2x breadth, not much longer than F-II . . . . . 26
26. F-II length more than 2x F-I (fig. 6). . . . . *zylia* Bohart  
 F-II less than twice as long as F-I, which is longer than broad. . . . . 27
27. LID a little greater than eye breadth in front view, metanotum not at all depressed medially, malar space less than 1 MOD. . . . . *perthensis* (Linsenmaier)  
 LID about equal to eye breadth in front view, metanotum usually with a faint medial depression, malar space more than 1 MOD. . . . . 28
28. Malar space less than 1.5 MOD; gonostyle slender distally. . . . . *intrudens* F. Smith  
 Malar space 1.5 MOD; gonostyle broad, emarginate distally . . . . . *sollicita* Mocsary

*Chrysis ausae* Bohart,  
 new species

Male holotype: Length 7.5 mm. Green to blue, middle of scutum partly purple, S-II with a double median spot (fig. 8), wings weakly stained. Punctation moderate and close, gradually finer posteriorly on abdomi-

nal terga. F-I 2.0x as long as broad, malar space 1.5 MOD, subantennal space 1.2 MOD, scapal basin moderately concave and LID 3.0x F-II length, TFC irregular and with a v-shaped medial indentation, transverse area beneath TFC projecting and roughly punctate, midocellus lidded, mesopleuron and metanotum simple, propodeal projection curved forward

toward apex along posterior margin (fig. 11), T-III pit row nearly obsolete, 4 distal teeth rather short but sharp, emarginations shallower than a semicircle (as in fig. 12). Gonostyle stoutly pointed (fig. 15c), cuspis broadly rounded at apex (fig. 15b), S-VIII nearly as long as broad (fig. 15a).

Female: As in male except: F-I 2.5x as long as broad, T-III prepit bulge moderate medially.

Holotype male, Sorcery Rocks, Kakadu National Park, Northern Territory, Australia, XI-20-79 (I.D. Naumann, Canberra Mus.). Paratypes, 1 female, same data as holotype; 3 females, Queensland: Cunnamulla (N. Geary, Davis Mus., Charleville (A. Henderson); New S. Wales: Midkia (Woodhill, Macleay Mus.). Also, 2 females (without abdomen), Queensland: Biloela, Tombeyston.

*Chrysis australis* Bohart,  
new species

Male holotype: Length 9 mm. Mostly dark blue and purple with some areas more greenish, S-II with a pair of transverse bars separated medially, wings weakly stained. Punctuation moderately coarse and close, that on T-III nearly as coarse as on T-II. F-I 3x as long as broad, malar and subantennal spaces 1.5 MOD, scapal basin pubescent on outer third, coarsely punctate medially, TFC jutting forward strongly and with posterior rami which nearly enclose preocellar area, LID a little more than eye breadth and about twice F-I length, midocellus lidded, mesopleuron and metanotum simple, propodeal projection large and sharply pointed as well as incurved posteriorly, T-II with distinct smooth median ridge, T-III pit row well formed and slightly depressed medially in lateral view, 4 distal teeth sharp, emarginations shallower than a semicircle. Gonostyle stout and with long inner hair (fig. 14c), cuspis slanting toward apex (fig. 14b), S-VIII a little longer than broad (fig. 16a).

Female: As in male except: F-I 3.2x as long as broad, LID narrower than eye and 1.6x F-I length.

Holotype male, Perth, Western Australia, XII-29-79 (R.M. Bohart, Perth Mus.). Paratypes, 4 females, W. Australia: 5 km s. Southern Cross, XI-20-79 (R.M. Bohart, Davis Mus.), Darlington, I-66 (G.H.L., Perth Mus.); "S. Australia" (Macleay Mus.).

*Chrysis norsemanae* Bohart,  
new species

Male holotype: Length 8 mm. Greenish blue, scape, vertex and T-III postpit area

deep blue, S-II with large and rectangular as well as separated spots, wings lightly stained. Punctuation coarse and close on thorax but becoming progressively finer on T-I-III, punctures of T-II a little separated toward apex and interpunctural areas microreticulate. F-I 3x as long as broad (fig. 7), malar space 2 MOD, subantennal space 1.5 MOD, scapal basin pubescent on outer third, middle third somewhat polished with scattered punctures and weak cross ridging, TFC broadly M-shaped and polished below its sharp ridge, short posterior rami from TFC present, LID more than eye breadth and about 2.2x F-I length, midocellus lidded, mesopleuron and metanotum simple, propodeal projection a little incurved behind and strongly pointing posteriorly, T-II median ridge evanescent, T-III pit row well formed but not depressed medially, 4 distal teeth sharp, emarginations much shallower than a semicircle, median one broad. Gonostyle stout and with long inner hair, cuspis slanting toward apex (about as in fig. 14b), S-VIII a little longer than broad.

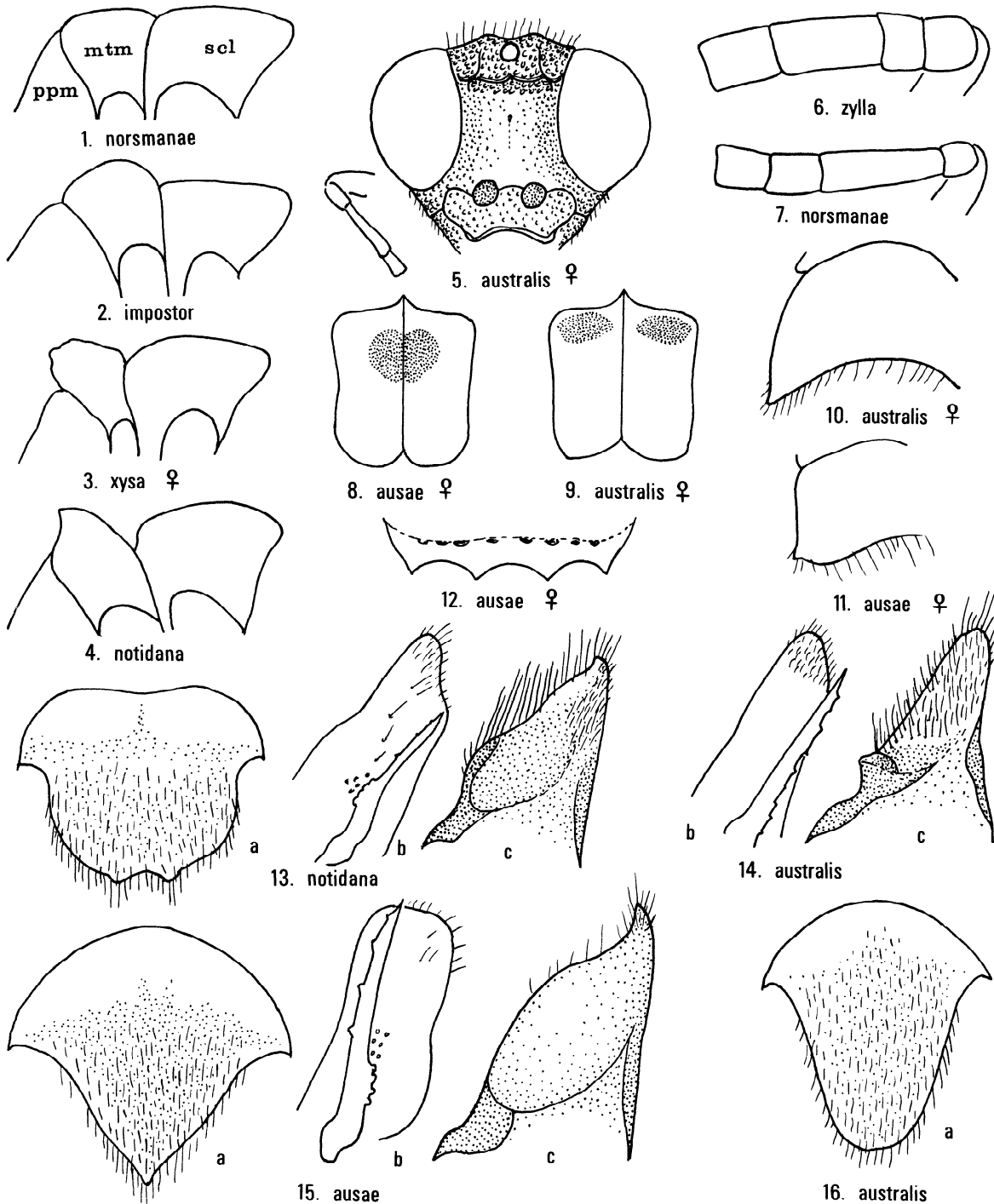
Female: About as in male.

Holotype male, 30 km sw. Norseman, Western Australia, IX-19-80 (I.D. Naumann, J.C. Cardale, Canberra Mus.). Paratype female, same data but taken 47 km ssw Norseman.

*Chrysis notidana* Bohart,  
new species

Male holotype: Length 8 mm. Green to blue-green, S-II with transverse but stout and slightly separated spots, wings weakly stained. Punctuation moderate on thorax and terga, that on T-III nearly as coarse as on T-II, fine on scapal basin where middle non-pubescent third has weak punctures and ridging. F-I 2x as long as broad, malar space 2 MOD, subantennal space 1.3 MOD, LID greater than eye breadth and 2.6x F-I length, TFC jutting strongly and punctate just below but not unusually rough there, posterior rami from TFC halfway toward midocellus which is lidded, mesopleuron simple, metanotum with a median keel-like tooth (fig. 4), sharp propodeal projection incurved behind and pointing posteriorly, T-II and to a lesser degree T-III with a raised and smooth median ridge, T-III pit row well formed and a little depressed medially, 4 distal teeth sharp, emarginations quite shallow. Gonostyle stout and with long inner hair (fig. 13c), cuspis slanting toward apex (fig. 13b), S-VIII broader than long (fig. 13a).

Female: about as in male except: Length 9 mm, F-I 2.5x as long as broad, LID 2.0x F-I length.



## Explanation of Illustrations

Figs. 1-4, diagrammatic profiles of scutellum (scl), metanotum (mtm) and propodeum (ppm); 5, face and base of right antenna; 6-7, pedicel and flagellomeres I-III; 8-9, S-II; 10-11, left propodeal projection from above and slightly behind; 12, T-III, posterior; 13-16, male terminalia, (a, S-VIII; b, digitus overlying cuspis; c, flattened gonostyle); 16, S-VIII. Drawings based on males except as indicated.

Holotype male, Round Hill Fauna Reserve, New South Wales, X-23-77 (G. Daniels, Canberra Mus.). Paratype female, Moorine Rock, W. Australia, X-22-78 (R.P. McMillian, Perth Mus.).

*Chrysis xysa* Bohart,  
new species

Female holotype: Length 12 mm. Greenish blue to purple, notum and terga mostly purple, S-II with a transverse black bar which is contiguous medially, wings brownish. Punctuation coarse and close except about 1 PD apart toward middle of terga, fine and close on scapal basin beneath fine pubescence which covers all but irregularly punctate central tenth. F-I 2.1x as long as broad, malar and subantennal spaces 1.5 MOD, LID a little more than eye breadth, 2.2x F-I length, TFC jutting strongly forward but depressed medially, area just below TFC punctate and prominent, posterior rami nearly enclosing a depressed preocellar area with elongate punctuation; midocellus lidded, mesopleuron with 2 obtusely rounded posterior teeth, metanotum medially with a stout pair of punctate and winglike projections (fig. 3), stout propodeal projection with a posterior lobe but pointing a little outward and backward, T-II with a slightly raised and polished midline which continues a little onto T-III, pit row of latter weakly formed but depressed except only slightly at middle below a moderate prepit bulge, 6 short teeth, outer pair obtuse, 2 inner pairs sharp and with emarginations less than semicircular.

Holotype female, Bluff Range, Biggenden, Queensland XII-20-72 (H. Frauca, Canberra Mus.). Paratypes, 2 females, 10 km s.

Coonabarabran, New S. Wales, I-17-80 (H.E. Evans, A. Hook, Davis Mus.); Eidsvold, Queensland (T.L. Bancroft, Canberra Mus.).

*Chrysis zylla* Bohart,  
new species

Male holotype: Length 8 mm. Blue-green, S-II with a transverse black bar, wings weakly stained. Punctuation moderate and close, that of T-III nearly as coarse and closer than that of T-II, fine on scapal basin where lateral third is pubescent. F-I a little broader than long and less than half as long as F-II (fig. 6), malar space 1.5 MOD, subantennal space 1.0 MOD, LID slightly more than eye breadth and at least 5x F-I length, TFC not strongly projecting and with 3 backward-pointing angles each of which subtends a short carina, midocellus lidded, mesopleuron and metanotum simple, propodeal projection posteriorly convex and apex directed outward, T-II with median ridge evanescent, T-III pit row weakly impressed all across, 6 distal teeth of which the two middle pair are sharp and in a line, outer pair right-angled, middle emargination nearly semicircular. Gonostyle ending in a finger-like projection, cuspis slender but with a slanting curve toward inner apex, S-VIII as long as broad, distal half moderately slender.

Female: About as in male except: Length 8.5 mm, F-I twice as long as broad, T-III median emargination shallow.

Holotype male, Waiweva, Narrabri, New South Wales, III-11-75 (R.E. Fye, Canberra Mus.). Paratype female, Stanthorpe, Queensland, II-11-30 (Brisbane Mus.).