

### Appendix 1. Thynnine wasps attracted in field choice experiments to taxa in the *Chiloglottis valida* group

*Chiloglottis* species: aff. = affinity to; thynnine species: *N.* = *Neozeleboria*; nr = near

<i>Chiloglottis</i> species	Source of orchid	Thynnine species	No. of wasps caught	No. of attempted matings	No. of pollinia removals	No. of pollinations	No. of visitors with pollinia
<i>1995 and 1996</i>							
Experiment 1. Birnum Picnic Ground, Kawarren, Vic., 2.12.1995, 3 exposures, single-sample test							
<i>C. aff. valida</i> 1	Birnum Picnic Ground	<i>N. nr impatiens</i>	8	0	0	0	0
Experiment 2. Birnum Picnic Ground, Kawarren, Vic., 3.12.1995, 11 exposures, allopatric test							
<i>C. aff. valida</i> 1	Birnum Picnic Ground	<i>N. nr impatiens</i>	11	0	0	0	0
<i>C. aff. valida</i> 2	Kosciuszko NP, NSW	<i>N. nr impatiens</i>	1	1	0	0	0
Experiment 3. Grampians NP, Vic., 3.12.1995, 20 exposures, allopatric test							
<i>C. aff. valida</i> 1	Birnum Picnic Ground	<i>N. nr impatiens</i>	20	0	0	0	0
<i>C. aff. valida</i> 2	Kosciuszko NP, NSW	<i>N. nr impatiens</i>	8	2	0	0	0
Experiment 4. Grampians NP, Vic., 3.12.1995, 19 exposures, allopatric test							
<i>C. aff. valida</i> 1	Birnum Picnic Ground	<i>N. nr impatiens</i>	10	0	0	0	0
<i>C. aff. valida</i> 2	Kosciuszko NP, NSW	<i>N. nr impatiens</i>	0	0	0	0	0
Experiment 5. Jimmy Ck, Grampians NP, Vic., 21.10.1996, 5 exposures, sympatric test							
<i>C. aff. valida</i> 1	Mt William, Grampians NP	<i>N. nr impatiens</i>	10	2	0	0	0
<i>C. aff. valida</i> 1	Halls Gap, Grampians NP	<i>N. nr impatiens</i>	24	5	0	0	0
Experiment 6. Jimmy Ck, Grampians NP, Vic., 21.10.1996, 4 exposures, sequential test							
A. <i>C. aff. valida</i> 1	Mt William, Grampians NP	<i>N. nr impatiens</i>	18	4	0	0	0
B. <i>C. aff. valida</i> 1	Halls Gap, Grampians NP	<i>N. nr impatiens</i>	4	0	0	0	0
Experiment 7. Jimmy Ck, Grampians NP, Vic., 21.10.1996, 12 exposures, sequential test							
<i>C. aff. valida</i> 1	Jimmy Ck, Grampians NP	<i>N. nr impatiens</i>	41	4	0	0	0
Experiment 8. Mt William, Grampians NP, Vic., 21.10.1996, 16 exposures, single-species test							
<i>C. aff. valida</i> 1	Mt William, Grampians NP	<i>N. nr impatiens</i>	11	0	0	0	2
Experiment 9. Mt William, Grampians NP, Vic., 21.10.1996, 16 exposures, single-species test							
<i>C. aff. valida</i> 1	Mt William, Grampians NP	<i>N. nr impatiens</i>	19	0	0	0	2
Experiment 10. Jacky's Swamp Rd, Cobobbonee State Forest, Vic., 24.10.1996, 15 exposures, single-species test							
<i>C. aff. valida</i> 1	Jacky's Swamp Rd	<i>N. nr impatiens</i>	1	0	0	0	0
Experiment 11. Surry River, Cobobbonee State Forest, Vic., 24.10.1996, 13 exposures, single-species test							
<i>C. aff. valida</i> 1	Jacky's Swamp Rd	<i>N. nr impatiens</i>	17	0	0	0	0
		<i>N. cryptooides</i>	1	0	0	0	0
<i>1997 and 1998</i>							

Experiment 12. Tantangara Dam Rd, Kiandra, 27.12.1997, 11 exposures, single-sample test							
C. aff. <i>valida</i> 2	Kiandra, NSW	<i>N. nr monticola</i>	16	2	0	1	0
Experiment 13. McNamara's Hut Tk, Falls Ck, 28.12.1997, 7 exposures, single-sample test							
C. aff. <i>valida</i> 2	Kiandra, NSW	<i>N. nr monticola</i>	17	5	0	0	1
Experiment 14. McNamara's Hut Tk, Falls Ck, 28.12.1997, 5 exposures, single-sample test							
B. C. aff. <i>valida</i> 2	Kiandra, NSW	<i>N. nr monticola</i>	32	3	1	0	0
Experiment 15. Five sites, Bogong Plains Rd, Falls Ck, 28.12.1997, 35 exposures, single-sample test							
C. aff. <i>valida</i> 2	Kiandra, NSW	<i>N. nr monticola</i>	31	1	1	0	0
Experiment 16. Stayleyville, Knocker Tk, Omeo, 29.12.1997, 1 exposure, single-sample test							
C. aff. <i>valida</i> 2	Kiandra, NSW	<i>N. nr impatiens</i>	18	12	1	0	0
Experiment 17. Stayleyville, Knocker Tk, Omeo, 29.12.1997, 3 exposures, single-sample test							
C. aff. <i>valida</i> 2	McNamara's Hut, Vic.	<i>N. nr impatiens</i>	16	0	0	0	0
Experiment 18. Mt Buller, 30.12.1997, 17 exposures, single-sample test							
C. aff. <i>valida</i> 2	Mt Buller, Vic.	<i>N. nr monticola</i>	14	1	1	0	0
		<i>N. nr impatiens</i>	1	0	0	0	0
Experiment 19. Delatite River, Mirimbah, 30.12.1997, 7 exposures, single-sample test							
C. aff. <i>valida</i> 2	Mt Buller, Vic.	<i>N. nr impatiens</i>	23	2	2	0	0
Experiment 20. Delatite River, Mirimbah, 30.12.1997, 3 exposures, single-sample test							
C. aff. <i>valida</i> 2	Kiandra, NSW	<i>N. nr impatiens</i>	10	1	0	0	0
Experiment 21. Doughty's Rd, Mirimbah, 30.12.1997, 2 exposures, single-sample test							
C. aff. <i>valida</i> 2	Mt Buller, Vic.	<i>N. nr impatiens</i>	16	0	0	0	0
Experiment 22. Mt Stirling Rd, 30.12.97, 14 exposures, single-sample test							
C. aff. <i>valida</i> 2	Mt Buller, Vic.	<i>N. nr monticola</i>	2	0	0	0	0
		<i>N. nr impatiens</i>	7	0	0	0	0
Experiment 23. Norman Tk, Noojee, 31.12.1997, 21 exposures, allopatric test							
C. aff. <i>valida</i> 2	Mt Buller, Vic.	<i>N. nr monticola</i>	1	0	0	0	0
C. aff. <i>valida</i> 2	Toorongo, Vic.	<i>N. nr monticola</i>	13	1	0	0	0
		<i>Eironae sp. C</i>	2	0	0	0	0
Experiment 24. Link Rd, Toorongo, 1.1.1998, 18 exposures, allopatric test							
C. aff. <i>valida</i> 2	Mt Buller, Vic.	<i>N. nr monticola</i>	6	1	0	0	0
C. aff. <i>valida</i> 2	Toorongo, Vic.	<i>N. nr monticola</i>	15	0	0	0	0
Experiment 25. Toorongo–Matlock Rd, 1.1.1998, 10 exposures, allopatric test							
C. aff. <i>valida</i> 2	Mt Buller, Vic.	<i>N. nr monticola</i>	1	0	0	0	0

<i>C. aff. valida</i> 2	Toorongo, Vic.	<i>N. nr monticola</i>	3	0	0	0	0
Experiment 26. Doughty's Rd, Mirimbah, 1.1.1998, 5 exposures, allopatric test							
<i>C. aff. valida</i> 2	Mt Buller, Vic.	<i>N. nr impatiens</i>	14	0	0	0	0
<i>C. aff. valida</i> 2	Toorongo, Vic.	<i>N. nr impatiens</i>	2	0	0	0	0
Experiment 27. Mt Buller, 2.1.1998, 15 exposures, allopatric test							
<i>C. aff. valida</i> 2	Mt Buller, Vic.	<i>N. nr monticola</i>	8	1	0	0	0
		<i>Eirone</i> sp. D	7	1	0	0	0
<i>C. aff. valida</i> 2	Toorongo, Vic.	<i>N. nr monticola</i>	10	4	0	0	0
Experiment 28. Mt Stirling, 2.1.1998, 23 exposures, allopatric test							
<i>C. aff. valida</i> 2	Mt Buller, Vic.	<i>N. nr monticola</i>	5	1	0	0	0
<i>C. aff. valida</i> 2	Toorongo, Vic.	<i>N. nr monticola</i>	3	0	0	0	0
Experiment 29. Delatite River, Mirimbah, 2.1.1998, 7 exposures, sequential test							
A. <i>C. aff. valida</i> 2	Toorongo, Vic.	<i>N. nr impatiens</i>	23	7	0	0	0
B. <i>C. aff. valida</i> 2	Mt Buller, Vic.	<i>N. nr impatiens</i>	21	7	2	0	0
Experiment 30. Doughty's Rd, Mirimbah, 2.1.1998, 8 exposures, single-sample test							
<i>C. aff. valida</i> 2	Toorongo, Vic.	<i>N. nr impatiens</i>	8	0	0	0	0
Experiment 31. Strawberry Saddle, Bogong Plains Rd, Falls Ck, 3–4.1.1998, 17 exposures, allopatric test							
<i>C. aff. valida</i> 2	Mt Buller, Vic.	<i>Eirone</i> sp. D	1	0	0	0	0
<i>C. aff. valida</i> 2	Toorongo, Vic.	<i>Eirone</i> sp. D	9	0	0	0	0
		<i>N. nr monticola</i>	1	0	0	0	0
Experiment 32. Stayleyville, Knocker Tk, Omeo, 4.1.1998, 10 exposures, allopatric test							
<i>C. aff. valida</i> 2	Mt Buller, Vic.	<i>N. nr impatiens</i>	14	6	1	0	0
<i>C. aff. valida</i> 2	Toorongo, Vic.	<i>N. nr impatiens</i>	3	0	0	0	0
Experiment 33. Stayleyville, Knocker Tk, Omeo, 4.1.1998, 10 exposures, single-sample test							
<i>C. aff. valida</i> 2	Toorongo, Vic.	<i>N. nr impatiens</i>	7	0	0	0	0
Experiment 34. Stayleyville, Knocker Tk, Omeo, 4.1.1998, 8 exposures, single-sample test							
<i>C. aff. valida</i> 2	Mt Buller, Vic.	<i>N. nr impatiens</i>	20	8	0	0	0
Experiment 35. Stayleyville, Knocker Tk, Omeo, 4.1.1998, 14 exposures, allopatric test							
<i>C. aff. valida</i> 2	Mt Buller, Vic.	<i>N. nr impatiens</i>	34	10	0	0	0
<i>C. aff. valida</i> 2	Toorongo, Vic.	<i>N. nr impatiens</i>	12	0	0	0	0
2000 and 2001							
Experiment 36. Stayleyville, Knocker Tk, Omeo, Vic. 1.11.2000, 12 exposures, allopatric test							
<i>C. aff. valida</i> 1	Kawarren, Vic.	<i>N. nr impatiens</i>	6	0	0	0	0

<i>C. aff. valida</i> 1	Mirimbah, Vic. (sample 1)	<i>N. nr impatiens</i>	11	3	0	0	0
Experiment 37. Stayleyville, Knocker Tk, Omeo, Vic. 1.11.2000, 5 exposures, allopatric test							
<i>C. valida</i>	Eildon SF, Vic.	<i>N. cryptooides</i>	3	1	0	0	0
<i>C. aff. valida</i> 1	Langwarrin, Vic.	<i>N. nr impatiens</i>	9	0	0	0	0
Experiment 38. Stayleyville, Knocker Tk, Omeo, Vic. 1.11.2000, 7 exposures, allopatric test							
<i>C. valida</i>	Eildon SF, Vic.	<i>N. cryptooides</i>	3	0	0	0	0
<i>C. aff. valida</i> 1	Langwarrin, Vic.	<i>N. nr impatiens</i>	7	0	0	0	0
<i>C. aff. valida</i> 1	Hepburn RP, Vic.	<i>N. nr impatiens</i>	13	0	0	0	0
Experiment 39. Stayleyville, Knocker Tk, Omeo, Vic. 1.11.2000, 9 exposures, allopatric test							
<i>C. valida</i>	Eildon SF, Vic.	<i>N. cryptooides</i>	1	0	0	0	0
<i>C. aff. valida</i> 1	Enfield Forest Park, Vic.	<i>N. nr impatiens</i>	10	0	0	0	0
		<i>N. sp. B1</i>	1	0	0	0	0
<i>C. aff. valida</i> 1	Mirimbah, Vic. (sample 2)	<i>N. nr impatiens</i>	4	0	0	0	0
Experiment 40. Stayleyville, Knocker Tk, Omeo, Vic. 1.11.2000, 7 exposures, allopatric test							
<i>C. valida</i>	Eildon SF, Vic.	<i>N. cryptooides</i>	5	0	0	0	0
<i>C. aff. valida</i> 1	Mirimbah, Vic. (sample 2)	<i>N. nr impatiens</i>	1	0	0	0	0
<i>C. aff. valida</i> 1	Knocker Tk, Vic.	<i>N. nr impatiens</i>	2	0	0	0	0
Experiment 41. Mirimbah, Vic. 26.11.2000, 8 exposures, allopatric test							
<i>C. valida</i>	Laurel Hill, NSW	<i>N. cryptooides</i>	10	0	0	0	0
<i>C. aff. valida</i> 2	Alpine Ck, NSW	<i>N. nr impatiens</i>	10	0	0	0	0
<i>C. aff. valida</i> 1	Knocker Tk, Vic.	<i>N. nr impatiens</i>	2	0	0	0	0
Experiment 42. Mirimbah, Vic. 26.11.2000, 8 exposures, allopatric test							
<i>C. valida</i>	O'Connors Hill, NSW	<i>N. cryptooides</i>	6	1	0	0	0
<i>C. valida</i>	Smokers Gap, ACT	<i>N. cryptooides</i>	10	1	0	0	0
<i>C. aff. valida</i> 1	Knocker Tk, Vic.	<i>N. nr impatiens</i>	12	0	0	0	0
		<i>N. cryptooides</i>	1	0	0	0	0
Experiment 43. Mirimbah, Vic. 26.11.2000, 6 exposures, allopatric test							
<i>C. valida</i>	Yarangobilly, NSW	<i>N. cryptooides</i>	10	2	1	0	0
<i>C. valida</i>	Buddong Falls Rd, NSW (1)		0				
<i>C. aff. valida</i> 1	Kawarren, Vic.	<i>N. nr impatiens</i>	18	0	0	0	0
<i>C. aff. valida</i> 2	Buddong Falls Rd, NSW (2)	<i>N. nr impatiens</i>	10	3	0	0	0
Experiment 44. Mirimbah, Vic. 26.11.2000, 19 exposures, allopatric test							
<i>C. valida</i>	Buddong Falls Rd, NSW (1)	<i>N. cryptooides</i>	11	0	0	0	0

<i>C. valida</i>	Tom Groggin, NSW	<i>N. cryptoides</i>	3	0	0	0	0
<i>C. aff. valida</i> 1	Mirimbah, Vic. (sample 2)	<i>N. nr impatiens</i>	22	0	0	0	0
<i>C. aff. valida</i> 1	Enfield Forest Park, Vic.	<i>N. nr impatiens</i>	15	0	0	0	0
Experiment 45. Doughty's Rd, Mirimbah, Vic. 27.11.2000, 4 exposures, allopatric test							
<i>C. valida</i>	Smokers Gap, ACT (1)	<i>N. monticola</i>	11	2	1	0	0
<i>C. valida</i>	Smokers Gap, ACT (2)		0				
<i>C. aff. valida</i> 1	Langwarrin, Vic.	<i>N. nr impatiens</i>	11	0	0	0	0
Experiment 46. Doughty's Rd, Mirimbah, Vic. 27.11.2000, 10 exposures, single-sample test							
<i>C. aff. valida</i> 1	Hepburn RP, Vic.	<i>N. nr impatiens</i>	13	4	0	0	1
Experiment 47. Doughty's Rd, Mirimbah, Vic. 27.11.2000, 16 exposures, allopatric test							
<i>C. valida</i>	Swampy Plains River, NSW		0				
<i>C. aff. valida</i> 1	Mirimbah, Vic. (sample 2)	<i>N. nr impatiens</i>	23	4	1	0	0
Experiment 48. Doughty's Rd, Mirimbah, Vic. 27.11.2000, 18 exposures, allopatric test							
<i>C. valida</i>	Scammells Ridge, NSW	<i>N. monticola</i>	11	3	1	0	0
<i>C. valida</i>	Alpine Ck, NSW	<i>N. monticola</i>	11	0	1	0	0
		<i>N. cryptoides</i>	1	0	0	0	0
<i>C. valida</i>	Buddong Falls Rd, (3)	<i>N. monticola</i>	10	3	0	0	0
<i>C. valida</i>	Swampy Plains River, NSW		0				
<i>C. aff. valida</i> 2	Buddong Falls Rd, NSW (2)	<i>N. nr impatiens</i>	22	1	2	0	2
<i>C. aff. valida</i> 2	Alpine Ck, NSW	<i>N. nr impatiens</i>	21	4	0	0	1
Experiment 49. Doughty's Rd, Mirimbah, Vic. 27.11.2000, 4 exposures, sequential allopatric test							
A. <i>C. valida</i>	Swampy Plains River, NSW	<i>N. monticola</i>	13	1	0	0	0
A. <i>C. valida</i>	Laurel Hill, NSW	<i>N. monticola</i>	15	1	0	0	0
B. <i>C. aff. valida</i> 2	Buddong Falls Rd, NSW (2)	<i>N. nr impatiens</i>	1	1	0	0	0
Experiment 50. McNamara's Hut, Falls Ck, Vic. 16.12.2000, 1 exposure, sympatric test							
<i>C. aff. valida</i> 2	McNamara's Hut, Vic.	<i>N. nr monticola</i>	1	0	0	0	0
<i>C. aff. valida</i> 2	McNamara's Hut, Vic.	<i>N. nr monticola</i>	12	1	1	0	1
Experiment 51. McNamara's Hut, Falls Ck, Vic. 16.12.2000, 7 exposures, sequential allopatric test							
<i>C. valida</i>	Buddong Falls Rd, NSW (1)		0				
<i>C. valida</i>	Laurel Hill, NSW		0				
<i>C. aff. valida</i> 2	McNamara's Hut, Vic.	<i>N. nr monticola</i>	13	1	0	0	2
<i>C. aff. valida</i> 2	McNamara's Hut, Vic.	<i>N. nr monticola</i>	19	0	0	0	1
Experiment 52. McNamara's Hut, Falls Ck, Vic. 16.12.2000, 10 exposures, allopatric test							

<i>C. aff.valida</i> 2	Bogong Plains Rd, Vic.	<i>N. nr monticola</i>	13	0	0	0	0
		<i>Eirone</i> sp. D	1	0	0	0	0
<i>C. aff. valida</i> 2	Mt Selwyn, NSW	<i>N. nr monticola</i>	6	0	0	0	0
<i>C. aff. valida</i> 2	Tooma Dam, NSW	<i>N. nr monticola</i>	8	0	0	0	0
<i>C. aff. valida</i> 2	Buddong Falls Rd, NSW (2)	<i>N. nr monticola</i>	3	0	0	0	0

Experiment 53. McNamara's Hut, Falls Ck, Vic. 16.12.2000, 5 exposures, sequential allopatric test

<i>A. C. valida</i>	Laurel Hill, NSW		0				
<i>A. C. aff. valida</i> 2	Buddong Falls Rd, NSW (2)	<i>N. nr monticola</i>	1	0	0	0	0
<i>B. C. aff. valida</i> 2	McNamara's Hut, Vic.	<i>N. nr monticola</i>	14	0	0	0	0

Experiment 54. Doughty's Rd, Mirimbah, Vic. 17.12.2000, 15 exposures, rolling allopatric test

<i>C. aff. valida</i> 2	McNamara's Hut, Vic. (1)	<i>N. nr impatiens</i>	14	3	0	0	0
<i>C. aff. valida</i> 2	McNamara's Hut, Vic. (2)	<i>N. nr impatiens</i>	11	0	0	0	0
<i>C. aff. valida</i> 2	Rams Horn Tk., Vic.	<i>N. nr impatiens</i>	11	2	0	0	0
<i>C. valida</i>	South of Nariel, Vic.		0				
<i>C. aff. valida</i> 2	Trapyard Gap, Vic.	<i>N. nr impatiens</i>	12	1	0	0	0
<i>C. aff. valida</i> 2	Bogong Plains Rd, Vic.	<i>N. nr impatiens</i>	13	1	0	0	0

Experiment 55. Doughty's Rd, Mirimbah, Vic. 17.12.2000, 25 exposures, rolling allopatric test

<i>C. valida</i>	South of Nariel, Vic.	<i>N. monticola</i>	4	0	0	0	0
<i>C. valida</i>	Cobberas Tk, Vic.	<i>N. monticola</i>	1	1	0	0	0
<i>C. aff. valida</i> 2	Tooma Dam, NSW	<i>N. nr impatiens</i>	14	0	0	0	0
<i>C. aff. valida</i> 2	Mt Selwyn, NSW	<i>N. nr impatiens</i>	12	2	0	0	0
		<i>N. monticola</i>	1	0	0	0	0
<i>C. aff. valida</i> 2	Kiandra, NSW	<i>N. nr impatiens</i>	14	4	2	0	1
<i>C. aff. valida</i> 2	Mt Misery Tk, Vic.	<i>N. nr impatiens</i>	13	1	0	0	0

Experiment 56. Doughty's Rd, Mirimbah, Vic. 17.12.2000, 21 exposures, rolling allopatric test

<i>C. valida</i>	Cobberas Tk, Vic.	<i>N. monticola</i>	6	0	0	0	0
<i>C. valida</i>	South of Nariel, Vic.	<i>N. monticola</i>	1	0	0	0	0
<i>C. aff. valida</i> 2	Mt Misery Tk, Vic.	<i>N. nr impatiens</i>	11	1	0	0	0
<i>C. aff. valida</i> 2	Glendart Tk, Vic.	<i>N. nr impatiens</i>	11	2	0	0	1
		<i>N. monticola</i>	4	0	0	0	0