

**Supplementary Material:** Greg Lefoe<sup>1</sup>, Laurence Haegi, Libby Rumpff, David Gopurenko, Anthony T. Slater, Kym Butler and Cindy E. Hauser

Assessing the fundamental host-range of *Leptinotarsa texana* Schaeffer as an essential precursor to biological control risk analysis.

1. Corresponding author email: greg.lefoe@agriculture.vic.gov.au

**Table S1: Australian Government approvals to import live *Leptinotarsa texana* for biological control research.**

<b>Authority</b>	<b>Approval</b>	<b>Number</b>
<b>Department of Agriculture</b>	Permit to Import Quarantine Material	0000253000
	Quarantine Registration	V2276
<b>Department of the Environment</b>	Testing Permit	PWS2016-AU-000050

### **Method S2: DNA barcoding and phylogenetic method**

Early instar larva (N=91) of *L. texana* used in DNA barcoding were raised as progeny from an imported adult population (provided by Iain Patterson at Rhodes University, Eastern Cape, South Africa) and maintained under Australian quarantine by GLe (Supplementary Table S1).

DNA barcodes of the mitochondrial 5' cytochrome *c* oxidase subunit I (COI) gene region were non-destructively obtained from larvae processed at the Wagga Wagga Agricultural

Institute (NSW Department of Primary industries), following methods in Gopurenko et al. (2013) modified using PCR primers LepF1 and LepR1 (Hebert et al. 2004). Sequenced PCR products (AGRF, Brisbane) were primer truncated to 658 bp, and exemplar haplotypes were identified using FABOX (Villesen, 2007) and deposited as accessions (MK288007 & MK288008) at GenBank. Haplotypes were queried for closest matching reported sequence accessions using online search engines at BLASTN (NCBI Resource Coordinators, 2017) and BOLD (Ratnasingham and Hebert, 2007).

Genetic distances and phylogenetic comparisons between haplotype sequences and all comparable COI sequences available for *Leptinotarsa* species at BOLD and or GenBank (searched 20 November 2019; Supplementary Table S3) including *L. decemlineata* (N=31), *L. haldemani* (N=3), *L. juncta* (N=6), *L. lineolata* (N=1), *L. texana* (N=2) and three outgroup leaf beetle species (Chrysomelinae: Doryphorini). Pair-wise and unweighted nucleotide distances among aligned sequences were summarised using *MEGA6* (Tamura et al., 2013) and excluded unidentified nucleotide sites from pair-wise comparisons. Phylogenetic analysis was conducted with maximum likelihood (ML) methods as implemented in *MEGA6* and incorporated an optimal General Time Reversible nucleotide substitution model with (5 category) gamma distribution (= 1.605) and invariant sites (= 0.489). A subtree-pruning-regrafting (level 5) heuristic coupled with a very weak branch swap filter was used to broaden the ML search of tree space. Clade supports for the optimal ML tree ( $\ln L = -2786.288$ ) were determined by bootstrap replication (N =100).

**Table S3: Mitochondrial DNA cytochrome *c* oxidase subunit 1 (COI) sequences (partial) of *Leptinotarsa* species and outgroup taxa<sup>1</sup> available at GenBank and or BOLD repositories (except where not available [NA]) and used in DNA barcoding and phylogenetic analyses with novel *L. texana* haplotype sequences\* detected among test specimens.**

Species	GenBank accession	BOLD process ID
<i>Leptinotarsa decemlineata</i>	AY165708	SBGB080-03
<i>Leptinotarsa decemlineata</i>	AY613926	NA
<i>Leptinotarsa decemlineata</i>	DQ011111	GBCL2319-06
<i>Leptinotarsa decemlineata</i>	DQ127906	GBCL2417-06
<i>Leptinotarsa decemlineata</i>	DQ127907	GBCL2418-06
<i>Leptinotarsa decemlineata</i>	DQ127908	GBCL2419-06
<i>Leptinotarsa decemlineata</i>	DQ127909	GBCL2420-06
<i>Leptinotarsa decemlineata</i>	DQ649094	GBCL2696-06
<i>Leptinotarsa decemlineata</i>	DQ649095	GBCL2697-06
<i>Leptinotarsa decemlineata</i>	DQ649096	GBCL2698-06
<i>Leptinotarsa decemlineata</i>	DQ649097	GBCL2699-06
<i>Leptinotarsa decemlineata</i>	DQ649098	GBCL2700-06
<i>Leptinotarsa decemlineata</i>	DQ649099	GBCL2701-06
<i>Leptinotarsa decemlineata</i>	DQ649100	GBCL2702-06
<i>Leptinotarsa decemlineata</i>	DQ649101	GBCL2703-06
<i>Leptinotarsa decemlineata</i>	HQ605768	GBCCH1845-14
<i>Leptinotarsa decemlineata</i>	HQ605769	GBCCH1837-14
<i>Leptinotarsa decemlineata</i>	KM439182	GBCOU3181-13
<i>Leptinotarsa decemlineata</i>	KM439249	GBCOU3500-13
<i>Leptinotarsa decemlineata</i>	KM439498	FBCOP264-13
<i>Leptinotarsa decemlineata</i>	KM444991	GBCOL193-12
<i>Leptinotarsa decemlineata</i>	KM446687	FBCOP312-13
<i>Leptinotarsa decemlineata</i>	KM448111	FBCOE1325-12
<i>Leptinotarsa decemlineata</i>	KM449504	GBCOU3182-13
<i>Leptinotarsa decemlineata</i>	KM450707	GBCOB948-12
<i>Leptinotarsa decemlineata</i>	KU907193	GCOL4486-16
<i>Leptinotarsa decemlineata</i>	KU909921	GCOL4023-16
<i>Leptinotarsa decemlineata</i>	KU911127	GCOL4487-16
<i>Leptinotarsa decemlineata</i>	KU914658	GCOL4022-16
<i>Leptinotarsa decemlineata</i>	KU915233	GCOL482-16
<i>Leptinotarsa decemlineata</i>	NA	TZBCA139-06
<i>Leptinotarsa haldemani</i>	DQ459377	GBCL2583-06
<i>Leptinotarsa haldemani</i>	HM433597	USCOL627-09
<i>Leptinotarsa haldemani</i>	HM433598	USCOL628-09
<i>Leptinotarsa juncta</i>	AY531756	GBCL1652-06
<i>Leptinotarsa juncta</i>	AY532655	GBCL1653-06
<i>Leptinotarsa juncta</i>	HQ605770	GBCCH1846-14
<i>Leptinotarsa juncta</i>	HQ605771	GBCCH1847-14

<i>Leptinotarsa juncta</i>	NA	BBCCA2098-12
<i>Leptinotarsa juncta</i>	KC255422	GBCCH4546-19
<i>Leptinotarsa lineolata</i>	NA	BBCCA2267-12
<i>Leptinotarsa texana</i>	HQ605774	GBCCH1888-14
<i>Leptinotarsa texana</i>	HQ605775	GBCCH1889-14
<i>Leptinotarsa texana</i> *	MK288007	GBMNA30569-19
<i>Leptinotarsa texana</i> *	MK288008	GBMNA30570-19
<i>Proseicela vittata</i> <sup>1</sup>	KF251124	GBCCH5089-19
<i>Calligrapha californica</i> <sup>1</sup>	KR487479	SMTPB18068-13
<i>Calligrapha confluens</i> <sup>1</sup>	HM411764	BBCEC067-09

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**Table S4: Native, naturalised and cultivated species of Solanaceae in Australia prioritised for host-specificity testing**

Scientific Name	Distribution	Native/Adv/ Cult	Major Clade	Subgroup in Lepto	Minor Clade in Lepto	SLN overlap	Priority	Comments	Propagation material	DNA source material
<i>Brugmansia candida</i> Pers.	*Qld, widely cult	Cult.	N/A	N/A	N/A	Y	M	Garden ornamental		
<i>Brugmansia suaveolens</i> (Humb. & Bonpl.ex Willd.) Bercht. & Presl	*NSW, widely cult	Cult.	N/A	N/A	N/A	Y	M	Garden ornamental		
<i>Brufelsia australis</i> Benth.	*QLD, widely cult	Cult.	N/A	N/A	N/A	Y	M	Garden ornamental		
<i>Capsicum annuum</i> L.	Widely glasshouse grown	Cult.	N/A	N/A	N/A	Y	H	Major food crop		
<i>Capsicum frutescens</i> L.	Widely glasshouse grown	Cult.	N/A	N/A	N/A	Y	H	Major food crop		
<i>Cestrum fasciculatum</i> (Schldl.) Miers	Widely cult	Cult.	N/A	N/A	N/A	Y	M	Garden ornamental		
<i>Cestrum parqui</i> L'Herit.	Widely cult	Cult., Adventive	N/A	N/A	N/A	Y	M	Garden ornamental		
<i>Cyphanthera albicans</i> subsp. <i>notabilis</i> Haegi	NSW	Native	N/A	N/A	N/A	Y	M		Seed - LH3030	LH3030
<i>Datura leichhardtii</i> F. Muell ex Benth.	Qld	?Native	N/A	N/A	N/A	Y	M		Seed - LH2980; LH3018	LH2980; LH3018
<i>Duboisia myoporoides</i> R.Br.	Qld, NSW	Native	N/A	N/A	N/A	Y	H		Seed - LH3043	LH3043
<i>Hyoscyamus niger</i> L.	Sparingly cult.	Cult.	N/A	N/A	N/A	Y	M	Garden		

								ornamental		
<b><i>Iochroma cyaneum</i> (Lindley) Green</b>	Cult.	Cult.	N/A	N/A	N/A		M			
<b><i>Lycianthes rantonettii</i> (Carriere) Bitter</b>	Widely cult.	Cult.	N/A	N/A	N/A	Y	M	Paraguyan Nightshade - Garden ornamental		
<b><i>Lycium australe</i> F.Muell.</b>	WA, SA, NSW, Vic	Native	N/A	N/A	N/A	Y	M			LH2990
<b><i>Nicotiana sylvestris</i> Speg. &amp; Comes</b>	Widely cult	Cult.	N/A	N/A	N/A	Y	M	Garden ornamental		
<b><i>Nicotiana tabacum</i> L.</b>	Commercial crop in Qld, ?NSW	Cult.	N/A	N/A	N/A	Y	H	Commercial crop		
<b><i>Nicotiana velutina</i> H.M. Wheeler</b>	WA, NT, SA, Qld, NSW, Vic	Native	N/A	N/A	N/A	Y	M		Seed - LH2985	LH2985; LH2999
<b><i>Petunia x atkinsiana</i> (Sweet) D.Don ex W.H.Baxter</b>	*WA, *NT, *NSW, ?*ACT, Widely cult	Adventive, Cult.	N/A	N/A	N/A		H	Garden ornamental		
<b><i>Physalis peruviana</i> L.</b>	Widely cult	Cult.	N/A	N/A	N/A	Y	M	Minor food crop / ornamental		
<b><i>Solandra maxima</i> (Sesse &amp; Mocino) Green</b>	Widely cult	Cult.	N/A	N/A	N/A	Y	M	Garden ornamental		
<b><i>Solanum abutiloides</i> (Griseb.) Bitter &amp; Lillo</b>	*Qld	Adventive	Brevanth	N/A		N	L			
<b><i>Solanum acanthodapis</i> A.R.Bean</b>	NSW	Native	Lepto	27B		?Y	M		Veg - LH3070	LH3030
<b><i>Solanum aculeastrum</i> Dunal</b>	*Qld (formerly)	Adventive	Lepto	29Z		N	L			
<b><i>Solanum adenophorum</i> F.Muell.</b>	Qld	Native	Lepto	25Z		N	L			
<b><i>Solanum adoxum</i> A. R. Bean</b>	Qld	Native	Lepto	27Z		N	L			

<i>Solanum amblymerum</i> Dunal	Qld, NSW	Native	Lepto	27B		Y	M		Veg - LH3058; LH3064	LH3058, LH3064
<i>Solanum ammophilum</i> A.R.Bean	NT, Qld, NSW	Native	Lepto	27C		Y	M			
<i>Solanum angustum</i> Domin	Qld	Native	Lepto	25Z		N	L			
<i>Solanum apodophyllum</i> A.R.Bean	NT	Native	Lepto	28Z		N	L			
<i>Solanum argopetalum</i> A.R.Bean	Qld	Native	Lepto	27C		N	L			
<i>Solanum aridicola</i> A.R.Bean	NT	Native	Lepto	27Z		N	L	<i>S. ellipticum</i> complex	Seed - LH3017	LH3017
<i>Solanum armourense</i> A.R.Bean	NSW	Native	Lepto	27B		Y	H			
<i>Solanum ashbyae</i> Symon	WA	Native	Lepto	27D		N	L			
<i>Solanum asymmetriphyllum</i> Specht	NT	Native	Lepto	28Z	OW(i)	N	L			
<i>Solanum austropiceum</i> A.R.Bean	WA	Native	Lepto	27C		N	L	<i>S. sturtianum</i> complex		
<i>Solanum aviculare</i> G.Forst.	*WA, *SA, Qld, NSW, Vic	Native	Archae	N/A		Y	H		Seed - LH3077	LH3077
<i>Solanum bauerianum</i> Endl.	LHI (?extinct), NI (?extinct)	Native	Lepto	05Z		N	L			
<i>Solanum beagleholei</i> Symon	WA	Native	Lepto	28Z		N	L			
<i>Solanum betaceum</i> Cav.	*Qld (sparingly), *NSW, Cult all States	Cult., Adventive	Cyphom	N/A		Y	H	Tamarillo - Commercial fruit		
<i>Solanum brownii</i> Dunal	NSW	Native	Lepto	27B		Y	M		Seed - LH3402	LH3042
<i>Solanum callosum</i> A.R.Bean	Qld, NSW	Native	Lepto	27Z		Y	M			
<i>Solanum campanulatum</i> R.Br.	NSW	Native	Lepto	25Z	OW(v)	Y	H		Seed -	LH3041

									LH3401	
<i>Solanum capitaneum</i> A.R.Bean	Qld	Native	Lepto	27Z		N	L			
<i>Solanum capsiciforme</i> (Domin) G.T.S.Baylis	WA, SA	Native	Archae	N/A		Y	M			
<i>Solanum capsicoides</i> All.	*Qld, *NSW	Adventive	Lepto	23Z		N	L		Seed - LH3069	LH3069
<i>Solanum carduiforme</i> F.Muell.	WA, NT, Qld	Native	Lepto	28Z		N	L			
<i>Solanum cataphractum</i> A.Cunn. ex Benth.	WA	Native	Lepto	28Z		N	L			
<i>Solanum celatum</i> A.R.Bean	NSW	Native	Lepto	27B		Y	M			
<i>Solanum centrale</i> J.M.Black	WA, NT, SA, Qld, Cult...	Native, Cult.	Lepto	27B		N	H	Bush Tomato - Commercial Bush tucker	Seed: LH3015	LH3015, LH3021
<i>Solanum chenopodium</i> F.Muell.	NT, SA, Qld, NSW	Native	Lepto	13Z	OW(vi)	Y	H		Seed - LH3016	LH2993, LH3016
<i>Solanum chenopodioides</i> Lam.	*NT, *SA, *Qld, *NSW,*ACT, *Vic	Adventive	Morell	N/A		Y	L			
<i>Solanum chillagoense</i> (Domin) A.R.Bean	Qld	Native	Lepto	27Z		N	L			
<i>Solanum chippendalei</i> Symon	WA, NT, Qld	Native	Lepto	28Z		N	L	Commercial Bush tucker		
<i>Solanum chrysotrichum</i> Schltldl.	*Qld, *NSW	Adventive	Lepto	14Z		N	L		Seed - LH3067	LH3067
<i>Solanum cinereum</i> R.Br.	*SA, Qld, NSW, ACT, *Vic	Native	Lepto	27B	OW(v)	Y	H		Seed - LH3031; Veg - LH3065	LH3031, LH3065
<i>Solanum clarkiae</i> Symon	NT	Native	Lepto	28Z	OW(ii)	N	L			



<i>Solanum cleistogamum</i> Symon	WA, NT, SA, Qld, NSW	Native	Lepto	27Z	OW(iii)	Y	H		Seed - LH3022, LH3033, LH3053A& B, LH3054	LH3022, LH3033, LH3053A & B, LH3054
<i>Solanum coactiliferum</i> J.M.Black	WA, NT, SA, NSW, Vic	Native	Lepto	27C		Y	H		Seed - LH2997, JP2; BS1137-200; BS1137-529	LH2997, LH3020
<i>Solanum cocosoides</i> A.R.Bean	Qld	Native	Lepto	27B		N	L			
<i>Solanum cookii</i> Symon	Qld	Native	Lepto	25Z		N	L			
<i>Solanum coracinum</i> Symon	Qld	Native	Lepto	13A		N	L			
<i>Solanum corifolium</i> F.Muell.	Qld, NSW (?extinct)	Native	Lepto	13Z		N	L			
<i>Solanum crassitomentosum</i> Domin	Qld	Native	Lepto	27B		N	L			
<i>Solanum crebrispinum</i> A.R.Bean	Qld	Native	Lepto	27Z		N	L			
<i>Solanum cunninghamii</i> Benth.	WA	Native	Lepto	28Z		N	L			
<i>Solanum curvicaspe</i> Domin	NSW	Native	Lepto	27B		Y	M		Veg - LH3079	LH3079
<i>Solanum defensum</i> F.Muell.	Qld	Native	Lepto	13Z		N	L			
<i>Solanum densevestitum</i> F.Muell. ex Benth.	Qld	Native	Lepto	09A		N	L			
<i>Solanum dimidiatum</i> Raf.	*Qld (formerly)	Adventive	Lepto	?		N	L			
<i>Solanum dimorphispinum</i> C.T.White	Qld	Native	Lepto	27A		N	L			
<i>Solanum dioicum</i> W.Fitzg.	WA, NT	Native	Lepto	28Z		N	L			

<i>Solanum discolor</i> R.Br.	Qld	Native	Lepto	13Z		N	L			
<i>Solanum dissectum</i> Symon	Qld	Native	Lepto	13Z		N	L			
<i>Solanum ditrichum</i> A.R.Bean	Qld, NSW	Native	Lepto	25Z		Y	M		Veg - LH3062	LH3062
<i>Solanum diversiflorum</i> F.Muell.	WA, NT	Native	Lepto	28Z	OW(ii)	N	L			
<i>Solanum douglasii</i> Dunal	*Vic	Adventive	Morell	N/A		Y	L			
<i>Solanum dryanderense</i> A.R.Bean	Qld	Native	Lepto	13Z		N	L			
<i>Solanum dulcamara</i> L.	*Tas	Adventive	Dulcam	N/A		N	L			
<i>Solanum dumicola</i> A.R.Bean	Qld	Native	Lepto	27B		N	L			
<i>Solanum dunalianum</i> Gaudich.	Qld	Native	Lepto	05Z		N	L			
<i>Solanum dysprosium</i> A.R.Bean	Qld	Native	Lepto	13Z		N	L			
<i>Solanum eardleyae</i> Symon	NT, SA	Native	Lepto	25Z		N	L			
<i>Solanum eburneum</i> Symon	NT	Native	Lepto	28Z		N	L			
<i>Solanum echinatum</i> R.Br.	WA, NT, Qld	Native	Lepto	27E	OW(iii)	N	L			
<i>Solanum elachophyllum</i> F.Muell.	Qld	Native	Lepto	27C		N	L			
<i>Solanum elaeagnifolium</i> Cav.	*WA, *SA, *Qld, *NSW, *Vic	Adventive	Lepto	27C	NW	Y	H			
<i>Solanum elatius</i> A.R.Bean	WA	Native	Lepto	27C		N	L	<i>S. sturtianum</i> complex		
<i>Solanum ellipticum</i> R.Br.	Qld, NSW	Native	Lepto	27Z		Y	M			
<i>Solanum eminens</i> A.R.Bean	Qld	Native	Lepto	27A		N	L			
<i>Solanum emmottii</i> A.R.Bean	NT, ?SA, Qld	Native	Lepto	27Z		N	L	<i>S. ellipticum</i> complex		
<i>Solanum eremophilum</i> F.Muell.	SA, NSW	Native	Lepto	25Z		Y	H		Veg - LH3057	LH3057

<i>Solanum erianthum</i> D.Don	*NT, *Qld, *NSW	Adventive	Brevanth	N/A		Y	L			
<i>Solanum esuriale</i> Lindl.	WA, NT, SA, Qld, NSW, Vic	Native	Lepto	27C		Y	H		Seed - LH2987, LH3002, JP1	LH2987, LH3002
<i>Solanum ferocissimum</i> Lindl.	WA, NT, SA, Qld, NSW	Native	Lepto	13Z	OW(vi)	Y	H		Seed - LH3034	LH3034
<i>Solanum ferox</i> L.	ChI, Qld	Native	Lepto	22Z		N	L			
<i>Solanum fervens</i> A.R.Bean	Qld	Native	Lepto	13Z		N	L			
<i>Solanum francisii</i> A.R.Bean	Qld	Native	Lepto	27B		N	L			
<i>Solanum furcatum</i> Dunal ex Poir.	*Vic, *Tas	Adventive	Morell	N/A		Y	L			
<i>Solanum furfuraceum</i> R.Br.	Qld	Native	Lepto	27B	OW(vi)	N	L			
<i>Solanum gabriellae</i> Domin	WA	Native	Lepto	27D		N	L			
<i>Solanum galbinum</i> A.R.Bean	Qld	Native	Lepto	27B		N	L			
<i>Solanum giganteum</i> Jacq.	*WA	Adventive	Lepto	05Z		N	L			
<i>Solanum gilesii</i> Symon	WA, NT	Native	Lepto	27D		N	L			
<i>Solanum graniticum</i> A.R.Bean	Qld	Native	Lepto	25Z		N	L			
<i>Solanum gympiense</i> Symon	Qld	Native	Lepto	09A		N	L			
<i>Solanum hamulosum</i> C.T.White	Qld	Native	Lepto	27A		N	L			
<i>Solanum hapalum</i> A.R.Bean	Qld, NSW	Native	Lepto	09A		Y	M		Veg - LH3074, LH3075	LH3074, LH3075
<i>Solanum hesperium</i> Symon	WA	Native	Lepto	27C		N	L			
<i>Solanum heteropodium</i> Symon	WA	Native	Lepto	28Z		N	L			
<i>Solanum hoplopetalum</i> Bitter &	WA, *WA, *SA	Native	Lepto	25Z		Y	H		Seed - DEM8624,	

<b>Summerh.</b>	(formerly)								DEM8628	
<i>Solanum horridum</i> Dunal ex Poir.	WA	Native	Lepto	27Z		N	L			
<i>Solanum hystrix</i> R.Br.	*WA (formerly), SA, *SA, *NSW (formerly)	Native	Lepto	25Z		Y	M			
<i>Solanum inaequilaterum</i> Domin	Qld, NSW	Native	Lepto	13Z		Y	M		Seed - LH3076; Veg - LH3071, LH3073, LH3076	LH3071, LH3073, LH3076
<i>Solanum incanum</i> L.	*Qld	Adventive	Lepto	29Z		N	L			
<i>Solanum innoxium</i> A.R.Bean	Qld	Native	Lepto	09A		N	L			
<i>Solanum intonsum</i> A.R.Bean	Qld	Native	Lepto	27B		N	L			
<i>Solanum iodinum</i> A.R.Bean	WA	Native	Lepto	27C		N	L	<i>S. sturtianum</i> complex		
<i>Solanum johnsonianum</i> A.R.Bean	Qld	Native	Lepto	09A		N	L			
<i>Solanum jucundum</i> A.R.Bean	Qld, NSW	Native	Lepto	27B		Y	M		Seed - LH3032	LH3032
<i>Solanum karsense</i> Symon	SA, NSW	Native	Lepto	27C		Y	H		Seed - LH3023	LH3023
<i>Solanum kentrocaule</i>	WA	Native	Lepto	27C		N	L	<i>S. sturtianum</i> complex		
<i>Solanum lachnophyllum</i> Symon	WA	Native	Lepto	27D		N	L			
<i>Solanum laciniatum</i> Aiton	*WA, SA, NSW, Vic, Tas	Native	Archae			Y	H		Seed - LH3044	LH3044
<i>Solanum lacunarium</i> F.Muell.	SA, Qld, NSW, Vic	Native	Lepto	25Z		Y	H		Seed - LH2991	LH2991

<i>Solanum lasiocarpum</i> Dunal	Qld	Native	Lepto	22Z		N	L			
<i>Solanum lasiophyllum</i> Dunal ex Poir.	WA, NT, SA, *Qld (formerly)	Native	Lepto	27D		Y	M/H		Seed: LH3014	LH3014
<i>Solanum latens</i> A.R.Bean	Qld	Native	Lepto	13Z		N	L			
<i>Solanum laxum</i> Spreng.	*NSW, *Vic, cult.	Adventive	Dulcam	N/A		Y	L	Potato vine - garden ornamental		
<i>Solanum leopoldense</i> Symon	WA	Native	Lepto	28Z		N	L			
<i>Solanum limitare</i> A.R.Bean	Qld, NSW	Native	Lepto	27B		Y	M			
<i>Solanum linearifolium</i> Geras. ex Symon	NSW, ACT, Vic	Native	Archae	N/A		Y	M			
<i>Solanum linnaeanum</i> Hepper & P.-M.L.Jaeger	*WA, *SA, *Qld, *NSW, *Vic	Adventive	Lepto	29Z		Y	L			
<i>Solanum lithophilum</i> F.Muell.	WA, SA, NT, Qld, NSW	Native	Lepto	27Z		Y	M	<i>S. ellipticum</i> complex	Seed - LH2982, LH2994, LH3052A&B; BS1097-904	LH2977, LH2982, LH2984, LH2994, LH2996, LH3052A &B
<i>Solanum lobatum</i> A.R. Bean	NT, SA	Native	Lepto	25Z		N	L			
<i>Solanum longissimum</i> A.R.Bean	Qld, NT	Native	Lepto	27E		N	L			
<i>Solanum lucani</i> F.Muell.	WA, NT	Native	Lepto	27E		N	L			
<i>Solanum lycopersicum</i> L.	*WA, *NT, *SA, *Qld, *NSW, ?*ACT, Cult. All States	Cult., Adventive	Potatoe	N/A		Y	H	Tomato - major food crop		
<i>Solanum lythrocarpum</i> A.R.Bean	Qld	Native	Lepto	13Z		N	L			
<i>Solanum macoorai</i> F.M.Bailey	Qld	Native	Lepto	27B		N	L			

<i>Solanum magnifolium</i> F.Muell.	Qld	Native	Lepto	27B		N	L			
<i>Solanum mammosum</i> L.	Sparingly widely cult.	Cult.	Lepto	23Z		Y	M	Rare ornamental		
<i>Solanum marginatum</i> L.f.	*SA (formerly), *Vic, *Tas	Adventive	Lepto	29Z		Y	L			
<i>Solanum mauritianum</i> Scop.	*SA, *Qld, *NSW, *Vic, Cult widely	Cult., Adventive	Brevanth	N/A		Y	M	Garden ornamental	Seed - LH3072	LH3072
<i>Solanum melanospermum</i> F.Muell.	NT	Native	Lepto	28Z		N	L			
<i>Solanum melongena</i> L.	?*SA, Cult. all states	Cult., Adventive	Lepto	29Z		Y	H	Eggplant - major food crop		
<i>Solanum mentiense</i> A.R.Bean	Qld	Native	Lepto	13Z		N	L			
<i>Solanum mitchellianum</i> Domin	Qld, NSW	Native	Lepto	13A		Y	M		Veg - LH3060	LH3060
<i>Solanum morrisonii</i> Domin	WA	Native	Lepto	27C		N	L	<i>S. sturtianum</i> complex		
<i>Solanum multiglochidiatum</i> Domin	Qld	Native	Lepto	25Z		N	L			
<i>Solanum muricatum</i> Aiton	Qld, NSW	Cult.	Potatoe	N/A		Y	H	Pepino - commercial fruit		
<i>Solanum nemophilum</i> F.Muell.	Qld	Native	Lepto	09A	OW(iv)	N	L			
<i>Solanum neoanglicum</i> A.R.Bean	NSW	Native	Lepto	27B		Y	M			
<i>Solanum nigrum</i> L.	*WA, *NT, *SA, *Qld, *NSW, *ACT, *Vic, *Tas	Adventive	Morell	N/A		Y	M		Seed - LH3081	LH2998, LH3081
<i>Solanum nobile</i> A.R.Bean	Qld, NSW	Native	Lepto	27B		Y	M			

<i>Solanum nodiflorum</i> Jacq.	*WA, *NT, ?Qld, *Qld, ?NSW, *NSW, *Vic, *Tas (sparingly)	Adventive	Morell	N/A		Y	L			
<i>Solanum nummularium</i> S.Moore	WA	Native	Lepto	27C	OW(iv)	Y	H		Seed - DEM8620	
<i>Solanum octonum</i> A.R.Bean	WA	Native	Lepto	27C		N	L	<i>S. sturtianum</i> complex		
<i>Solanum oedipus</i> Symon	WA	Native	Lepto	28Z		N	L			
<i>Solanum oldfieldii</i> F.Muell.	WA	Native	Lepto	27C		Y	H			
<i>Solanum oligacanthum</i> F.Muell.	SA, Qld, NSW	Native	Lepto	27C		Y	M		Seed - LH2992	LH2992
<i>Solanum oligandrum</i> Symon	WA	Native	Lepto	25Z		N	L			
<i>Solanum opacum</i> A.Braun & Bouche	SA, Qld, NSW, Vic, Tas	Native	Morell	N/A		Y	H		Seed - LH3063, LH3080	LH3063, LH3080
<i>Solanum orbiculatum</i> Dunal ex Poir. (incl. subspp. <i>orbiculatum</i> & <i>macrophyllum</i> Symon)	WA, NT, SA	Native	Lepto	27C		Y	M		Seed - CJB7220; BS 1137- 191; BS1137-466	
<i>Solanum orgadophilum</i> A.R.Bean	Qld	Native	Lepto	27B		N	L			
<i>Solanum ossicrumentum</i> Martine	NT	Native	Lepto	28Z		N	L			
<i>Solanum osteocarpum</i> A.R. Bean	NT, SA	Native	Lepto	25Z		N	L			
<i>Solanum pallidifolium</i> A.R. Bean	WA, NT, SA	Native	Lepto	25Z		N	L			
<i>Solanum papaverifolium</i> Symon	Qld, NSW	Native	Lepto	25Z		Y	M			

<i>Solanum parvifolium</i> R.Br. (incl. subsp. <i>parvifolium</i> (Qld, NSW) & subsp. <i>tropicum</i> A. R. Bean (Qld only)	Qld, NSW	Native	Lepto	13Z		Y	M		Seed - LH3029, LH3056, LH3059; Veg - LH3056	LH3029, LH3056, LH3059
<i>Solanum petraeum</i> Symon	WA	Native	Lepto	28Z		N	L			
<i>Solanum petrophilum</i> F.Muell.	WA, SA, NSW	Native	Lepto	25Z	OW(v)	Y	H		Seed - LH2974, LH2995	LH2974, LH2995
<i>Solanum phlomoides</i> A.Cunn. ex Benth.	WA	Native	Lepto	28Z		N	L			
<i>Solanum physalifolium</i> Rusby [var. <i>nitidibaccatum</i> (Bitter) Edmonds]	*SA, *Qld, *NSW, *ACT (doubtfully), *Vic, *Tas	Adventive	Morell	N/A		Y	L			
<i>Solanum piceum</i> A.R.Bean	WA	Native	Lepto	27C		N	L	<i>S. sturtianum</i> complex		
<i>Solanum pisinnum</i> A.R.Bean	Qld	Native	Lepto	27B		N	L			
<i>Solanum plicatile</i> (S.Moore) Symon	WA	Native	Lepto	27C		Y	M			
<i>Solanum prinophyllum</i> Dunal	Qld, NSW, Vic	Native	Lepto	25Z	OW(v)	Y	M			
<i>Solanum prolatum</i> A.R.Bean	Qld	Native	Lepto	27Z		N	L			
<i>Solanum pseudocapsicum</i> L.	*WA, *SA, *Qld, *NSW, *Vic, *Tas, Cult.	Cult., Adventive	Geminata	N/A		Y	M	Winter Cherry - potted ornamental	Seed - LH3061	LH3061
<i>Solanum pseudolulo</i> Heiser	*Qld (doubtfully).	Adventive	Lepto	22Z		N	L			
<i>Solanum pugiunculiferum</i> C.T.White	WA, Qld, NT	Native	Lepto	25A	OW(iv)	N	H			



<i>Solanum pungetium</i> R.Br.	NSW, Vic	Native	Lepto	25Z		Y	M			
<i>Solanum pusillum</i> A.R.Bean	Qld	Native	Lepto	25Z		N	L			
<i>Solanum pycnotrichum</i> A.R.Bean	WA	Native	Lepto	27C		N	L	<i>S. sturtianum</i> complex		
<i>Solanum pyracanthos</i> Lam.	*Qld (formerly)	Adventive	Lepto	?		N	L			
<i>Solanum quadriloculatum</i> F.Muell.	WA, NT, SA, Qld, NSW	Native	Lepto	27Z		Y	H		Seed - LH2976, LH2978, LH2981	LH2976, LH2978, LH2981, LH2988
<i>Solanum quitoense</i> Lam.	[SA, Qld, NSW]	Cult.	Lepto	22Z		Y	H	Naranjilla - home garden fruit		
<i>Solanum radicans</i> L.f.	*NSW	Adventive	Potatoe	N/A		Y	L			
<i>Solanum reclusum</i> A.R.Bean	WA	Native	Lepto	27C		N	L	<i>S. sturtianum</i> complex		
<i>Solanum retroflexum</i> Dunal	*SA	Adventive	Morell	N/A		Y	L			
<i>Solanum rixosum</i> A.R.Bean	Qld, NSW	Native	Lepto	27B		Y	M			
<i>Solanum rostratum</i> Dunal	*WA, *SA, *Qld (formerly), *NSW, *ACT (doubtfully), *Vic	Adventive	Lepto	33Z		Y	L			
<i>Solanum sarrachoides</i> Sendtn.	*NSW	Adventive	Morell	N/A		Y	L			
<i>Solanum seafortianum</i> Andrews	*WA, *SA (sparingly), *Qld, *NSW	Cult., Adventive	Potatoe	N/A		Y	M	Garden ornamental		
<i>Solanum sejunctum</i> Brennan, Martine & Symon	NT	Native	Lepto	28Z	OW(i)	N	L			
<i>Solanum semiarmatum</i> F.Muell.	Qld, NSW	Native	Lepto	13A		Y	M			

<i>Solanum senticosum</i> A.R.Bean	Qld	Native	Lepto	27Z		N	L			
<i>Solanum serpens</i> A.R.Bean	Qld, NSW	Native	Lepto	27B		Y	M			
<i>Solanum shirleyanum</i> Domin	Qld, NSW	Native	Lepto	13Z		Y	M			
<i>Solanum silvestre</i> A.R.Bean	NSW, Vic	Native	Lepto	27B		Y	M			
<i>Solanum simile</i> F.Muell.	WA, SA, NSW, Vic	Native	Archae	N/A		Y	M			
<i>Solanum sisymbriifolium</i> Lam.	*WA, *Qld, *NSW	Adventive	Lepto	?		Y	L			
<i>Solanum spirale</i> Roxb. (formerly <i>S. callium</i> C.T. White)	Qld, *NSW (doubtfully)	Native	Geminata	N/A		Y	L			
<i>Solanum sporadotrichum</i> F.Muell.	Qld	Native	Lepto	27B		N	L			
<i>Solanum stelligerum</i> Sm.	Qld, NSW	Native	Lepto	13Z	OW(vi)	Y	H		Seed - LH3066; Veg - LH3066	LH3066
<i>Solanum stenopterum</i> A.R.Bean	Qld, NSW (?extinct)	Native	Lepto	25Z		Y	M			
<i>Solanum stupefactum</i> Symon	Qld	Native	Lepto	29Z		Y	L			
<i>Solanum sturtianum</i> F.Muell.	WA, NT, SA, Qld, NSW	Native	Lepto	27C		Y	M		Seed - LH2979; BGSAW81 0099 W842898; JH1;	LH2979
<i>Solanum succosum</i> A.R.Bean & Albr.	NT, SA	Native	Lepto	28Z		Y	M			
<i>Solanum sulphureum</i> A.R. Bean	NSW	Native	Lepto	27B		Y	M			
<i>Solanum symonii</i> H.Eichler	WA, SA	Native	Archae			Y	M			
<i>Solanum terraneum</i> Symon	WA	Native	Lepto	27Z		Y	M/H			

<i>Solanum tetrandrum</i> R.Br.	NT	Native	Lepto	05Z		N	L			
<i>Solanum tetrahecum</i> F.Muell.	Qld	Native	Lepto	27B		N	L			
<i>Solanum torvum</i> Sw.	*NT, *Qld	Adventive	Lepto	14Z		N	H			
<i>Solanum triflorum</i> Nutt.	*WA, *SA, *Qld (formerly), *NSW, *ACT, *Vic, *Tas (sparingly)	Adventive	Potatoe	N/A		Y	L			
<i>Solanum tuberosum</i> L.	*WA, ?*ACT, Cult.	Cult., Adventive	Potatoe	N/A		Y	H	Potato - major food crop		
<i>Solanum tudununggae</i> Symon	WA	Native	Lepto	28Z		N	L			
<i>Solanum tumulicola</i> Symon	NT	Native	Lepto	27C		N	L			
<i>Solanum ultimum</i> A.R.Bean	Qld	Native	Lepto	09A		N	L			
<i>Solanum ultraspinosum</i> A.R.Bean	NT	Native	Lepto	28Z		N	L			
<i>Solanum unispinum</i> A.R.Bean	Qld	Native	Lepto	27Z		N	L			
<i>Solanum vansittartense</i> C.A.Gardner	WA	Native	Lepto	28Z		N	L			
<i>Solanum versicolor</i> A.R.Bean	Qld	Native	Lepto	27C		N	L			
<i>Solanum vescum</i> F.Muell.	Qld, NSW, ACT, Vic, Tas	Native	Archae	N/A		Y	L			
<i>Solanum vicinum</i> A.R.Bean	Qld, NSW	Native	Lepto	25Z		Y	M		Veg - LH3078	LH3078
<i>Solanum villosum</i> Mill.	*WA, *SA, *Qld (sparingly)	Adventive	Morell	N/A		Y	L			
<i>Solanum viridifolium</i> Dunal	Qld	Native	Lepto	05Z		N	L			
<i>Solanum watneyi</i> Martine & Frawley	NT	Native	Lepto	28Z		N	L	Aff. <i>S. eburneum</i>		

<i>Solanum wendlandii</i> Hook.f.	Sparingly widely cult.	Cult.	Wendl / Alloph	N/A		Y	M	Garden ornamental		
<i>Solanum yirkalense</i> Symon	NT, Qld	Native	Lepto	13Z		N	L			
<i>Solanum zoeae</i> R.L. Barrett	WA	Native	Lepto	28Z						

### Explanatory notes for Table S4

Distribution	Distribution (occurrence) is given by Australian States and Territories; an asterisk* indicates a naturalised (adventive) occurrence; ? = questionably native or naturalised; State-based information generally not available for species in cultivation.
Native/Adv/Cult (Adventive, Native, Cultivation information)	<p>The term adventive is used interchangeably with "naturalised". This may apply to the whole species (where non-Australian species have been introduced and become weedy) but may also apply where self-sustaining populations of species native to one region have been introduced elsewhere (e.g. <i>Solanum cinereum</i>, native to Qld, NSW &amp; ACT but naturalised in SA &amp; Vic). Some non-native species are only found in cultivation; some native species are now cultivated on a commercial basis.</p> <p>Information is provided on whether the cultivated species is of major commercial importance, e.g. as a food plant or as an ornamental, or whether grown as a garden ornamental generally or on a limited basis.</p>
Priority (rationale)	The major subgrouping within the genus <i>Solanum</i> . SLN ( <i>Solanum elaeagnifolium</i> ) falls within the <i>Leptostemonum</i> clade ("Lepto"), as with most native Australian species. Priorities include coverage of subgroups in this clade (listed in Table S4 above); the other main clades as follows <i>Archaeosolanum</i> ("Archae"), a small number of characteristically Australasian species, the Morelloids ("Morell"), with several weedy species and one native species and the <i>Brevantherum</i> ("Brevanth"), <i>Cyphomandra</i> ("Cypho"), <i>Dulcamaroid</i> ("Dulcam"), <i>Geminata</i> , <i>Potato</i> and <i>Wendlandii</i> ("Wendl") clades, each represented by a small number of naturalised and cultivated species; overlap in geographical occurrence with SLN; coverage of Old World clades recognised to date; important species in cultivation ("Cult.") and species of importance in Australian Aboriginal culture ("Indig.").

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