Last login: Tue May 30 08:11:37 on console

margiemayfield@d-i184-17-145:~$ ls

Applications/ Dropbox (Old (1))/ Movies/ Sites/

Desktop/ Dropbox (Old (2))/ Music/ test.grd

Documents/ Dropbox (Old)/ Pictures/ test.gri

Downloads/ Google Drive/ Public/

Dropbox/ Library/ Send Registration@

margiemayfield@d-i184-17-145:~$ cd Google\ Drive/

margiemayfield@d-i184-17-145:~/Google Drive$ ls

Admin Documents/ Mayfield Media/

Code/ Old assignments/

FunctionalTraitDatabase/ PJ Fair prices.rtf

Gender Study 2017/ PyCharm/

Getting started Spatial Ecology/

Icon? Timesheets/

LaTeX/ Western Australia Coexistence/

Lab meetings/ ~$\_academic-portfolio-formA\_2017.docx

Margie\_promotion/

margiemayfield@d-i184-17-145:~/Google Drive$ cd FunctionalTraitDatabase/

margiemayfield@d-i184-17-145:~/Google Drive/FunctionalTraitDatabase$ sqlite3 testdb.db

SQLite version 3.8.10.2 2015-05-20 18:17:19

Enter ".help" for usage hints.

sqlite> .header on

sqlite> .mode column

sqlite> select \* from contacts;

contact\_id first\_name last\_name email phone age

---------- ---------- ---------- ----------------- ---------- ----------

1 chrissy elmer c.elmer@uq.edu.au 0474808044 22.9

sqlite> INSERT INTO contacts (first\_name, last\_name, age) VALUES ('tom', 'cranny', 23)

...> ;

Error: NOT NULL constraint failed: contacts.email

sqlite> INSERT INTO contacts (first\_name, last\_name, email, phone, age) VALUES ('tom', 'cranny','hi','1234', 22);

sqlite> select \* from contacts;

contact\_id first\_name last\_name email phone age

---------- ---------- ---------- ----------------- ---------- ----------

1 chrissy elmer c.elmer@uq.edu.au 0474808044 22.9

2 tom cranny hi 1234 22

sqlite> select sql from sqlite\_master where type='table' and name='contacts';

sql

---------------------------------------------------------------------------------------------

CREATE TABLE contacts (

contact\_id integer PRIMARY KEY,

first\_name text NOT NULL,

last\_name text NOT NULL,

email text NOT NULL UNIQUE,

phone text NOT NULL UNIQUE

, age integer)

sqlite> .open test\_trait.db

sqlite>

[1]+ Stopped sqlite3 testdb.db

margiemayfield@d-i184-17-145:~/Google Drive/FunctionalTraitDatabase$ ls

create\_database\_structure.sql db\_structure.png table structure.pptx testdb.db

database\_structure.txt sqliteTutorial.sql test\_trait\_database/ traitdb\_concept\_map2.png

margiemayfield@d-i184-17-145:~/Google Drive/FunctionalTraitDatabase$ cd test\_trait\_database/

margiemayfield@d-i184-17-145:~/Google Drive/FunctionalTraitDatabase/test\_trait\_database$ sqlite3 test\_trait.db

SQLite version 3.8.10.2 2015-05-20 18:17:19

Enter ".help" for usage hints.

sqlite> CREATE TABLE projects (

...> test\_trait.db project\_id integer PRIMARY KEY,

...> test\_trait.db researcher text NOT NULL,

...> test\_trait.db email text NOT NULL,

...> test\_trait.db site text NOT NULL);

Error: near ".": syntax error

sqlite> CREATE TABLE projects (

...> test\_trait.db project\_id integer PRIMARY KEY,

...> test\_trait.db researcher text NOT NULL,

...> test\_trait.db email text NOT NULL,

...> test\_trait.db site text NOT NULL);

Error: near ".": syntax error

sqlite> CREATE TABLE projects (CREATE TABLE projects (

...> project\_id integer PRIMARY KEY,

...> researcher text NOT NULL,

...> email text NOT NULL,

...> site text NOT NULL);

Error: near "CREATE": syntax error

sqlite> CREATE TABLE projects (

...> project\_id integer PRIMARY KEY,

...> researcher text NOT NULL,

...> email text NOT NULL,

...> site text NOT NULL);

sqlite>

sqlite> INSERT INTO projects (project\_id, researcher, email, study\_site)

...> VALUES (1, 'chrissy elmer', 'c.elmer@uq.edu.au', 'Tasmania');

Error: table projects has no column named study\_site

sqlite> INSERT INTO projects (project\_id, researcher, email, site)

...> VALUES (1, 'chrissy elmer', 'c.elmer@uq.edu.au', 'Tasmania');

sqlite> INSERT INTO projects (project\_id, researcher, email, site)

...> VALUES (2 'cath bowler', 'c.bowler@uq.edu.au', 'WA');

Error: near "'cath bowler'": syntax error

sqlite> INSERT INTO projects (project\_id, researcher, email, site)

...> VALUES (2, 'cath bowler', 'c.bowler@uq.edu.au', 'WA');

sqlite> .headers on

sqlite> .mode columns

sqlite> select \* from projects

...> ;

project\_id researcher email site

---------- ------------- ----------------- ----------

1 chrissy elmer c.elmer@uq.edu.au Tasmania

2 cath bowler c.bowler@uq.edu.a WA

sqlite> CREATE TABLE field\_season (

...> fs\_id integer PRIMARY KEY,

...> project\_id integer,

...> year integer NOT NULL,

...> crew\_list text NOT NUll,

...> FOREIGN KEY(project\_id) REFERENCES projects(project\_id));

sqlite> INSERT INTO field\_season VALUES (1, 1, 2016, 'Chrissy, Loy, Leander, Hannah, Ian');

sqlite> INSERT INTO field\_season VALUES (2, 1, 2017, 'Chrissy, Loy, Leander, Hannah, Ian');

sqlite> INSERT INTO field\_season VALUES (3, 2, 2015, 'Cath, Trace, Maia, Margie');

sqlite> INSERT INTO field\_season VALUES (4, 2, 2016, 'Cath, Trace, Maia, Margie');

sqlite> select \* from field\_season;

fs\_id project\_id year crew\_list

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1 1 2016 Chrissy, Loy, Leander, Hannah, Ian

2 1 2017 Chrissy, Loy, Leander, Hannah, Ian

3 2 2015 Cath, Trace, Maia, Margie

4 2 2016 Cath, Trace, Maia, Margie

sqlite> select \* from projects CROSS join field\_season;

project\_id researcher email site fs\_id project\_id year crew\_list

---------- ------------- ----------------- ---------- ---------- ---------- ---------- ----------------------------------

1 chrissy elmer c.elmer@uq.edu.au Tasmania 1 1 2016 Chrissy, Loy, Leander, Hannah, Ian

1 chrissy elmer c.elmer@uq.edu.au Tasmania 2 1 2017 Chrissy, Loy, Leander, Hannah, Ian

1 chrissy elmer c.elmer@uq.edu.au Tasmania 3 2 2015 Cath, Trace, Maia, Margie

1 chrissy elmer c.elmer@uq.edu.au Tasmania 4 2 2016 Cath, Trace, Maia, Margie

2 cath bowler c.bowler@uq.edu.a WA 1 1 2016 Chrissy, Loy, Leander, Hannah, Ian

2 cath bowler c.bowler@uq.edu.a WA 2 1 2017 Chrissy, Loy, Leander, Hannah, Ian

2 cath bowler c.bowler@uq.edu.a WA 3 2 2015 Cath, Trace, Maia, Margie

2 cath bowler c.bowler@uq.edu.a WA 4 2 2016 Cath, Trace, Maia, Margie

sqlite> CREATE TABLE traits (

...> trait\_id integer PRIMARY KEY,

...> fs\_id integer,

...> traits text NOT NULL,

...> FOREIGN KEY(fs\_id) REFERENCES field\_season(fs\_id));

sqlite> INSERT INTO traits VALUES (1, 1, 'SLA, leaf area, RTD'),

...> (2, 2, 'biomass, leaf area, RTD'),

...> (3, 3, 'L:S, leaf area, RTD'),

...> (4, 4, 'SLA, height, RTD');

sqlite> select \* from projects CROSS join field\_season cross join traits;

project\_id researcher email site fs\_id project\_id year crew\_list trait\_id fs\_id traits

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1 chrissy elmer c.elmer@uq.edu.au Tasmania 1 1 2016 Chrissy, Loy, Leander, Hannah, Ian 1 1 SLA, leaf area, RTD

1 chrissy elmer c.elmer@uq.edu.au Tasmania 1 1 2016 Chrissy, Loy, Leander, Hannah, Ian 2 2 biomass, leaf area,

1 chrissy elmer c.elmer@uq.edu.au Tasmania 1 1 2016 Chrissy, Loy, Leander, Hannah, Ian 3 3 L:S, leaf area, RTD

1 chrissy elmer c.elmer@uq.edu.au Tasmania 1 1 2016 Chrissy, Loy, Leander, Hannah, Ian 4 4 SLA, height, RTD

1 chrissy elmer c.elmer@uq.edu.au Tasmania 2 1 2017 Chrissy, Loy, Leander, Hannah, Ian 1 1 SLA, leaf area, RTD

1 chrissy elmer c.elmer@uq.edu.au Tasmania 2 1 2017 Chrissy, Loy, Leander, Hannah, Ian 2 2 biomass, leaf area,

1 chrissy elmer c.elmer@uq.edu.au Tasmania 2 1 2017 Chrissy, Loy, Leander, Hannah, Ian 3 3 L:S, leaf area, RTD

1 chrissy elmer c.elmer@uq.edu.au Tasmania 2 1 2017 Chrissy, Loy, Leander, Hannah, Ian 4 4 SLA, height, RTD

1 chrissy elmer c.elmer@uq.edu.au Tasmania 3 2 2015 Cath, Trace, Maia, Margie 1 1 SLA, leaf area, RTD

1 chrissy elmer c.elmer@uq.edu.au Tasmania 3 2 2015 Cath, Trace, Maia, Margie 2 2 biomass, leaf area,

1 chrissy elmer c.elmer@uq.edu.au Tasmania 3 2 2015 Cath, Trace, Maia, Margie 3 3 L:S, leaf area, RTD

1 chrissy elmer c.elmer@uq.edu.au Tasmania 3 2 2015 Cath, Trace, Maia, Margie 4 4 SLA, height, RTD

1 chrissy elmer c.elmer@uq.edu.au Tasmania 4 2 2016 Cath, Trace, Maia, Margie 1 1 SLA, leaf area, RTD

1 chrissy elmer c.elmer@uq.edu.au Tasmania 4 2 2016 Cath, Trace, Maia, Margie 2 2 biomass, leaf area,

1 chrissy elmer c.elmer@uq.edu.au Tasmania 4 2 2016 Cath, Trace, Maia, Margie 3 3 L:S, leaf area, RTD

1 chrissy elmer c.elmer@uq.edu.au Tasmania 4 2 2016 Cath, Trace, Maia, Margie 4 4 SLA, height, RTD

2 cath bowler c.bowler@uq.edu.a WA 1 1 2016 Chrissy, Loy, Leander, Hannah, Ian 1 1 SLA, leaf area, RTD

2 cath bowler c.bowler@uq.edu.a WA 1 1 2016 Chrissy, Loy, Leander, Hannah, Ian 2 2 biomass, leaf area,

2 cath bowler c.bowler@uq.edu.a WA 1 1 2016 Chrissy, Loy, Leander, Hannah, Ian 3 3 L:S, leaf area, RTD

2 cath bowler c.bowler@uq.edu.a WA 1 1 2016 Chrissy, Loy, Leander, Hannah, Ian 4 4 SLA, height, RTD

2 cath bowler c.bowler@uq.edu.a WA 2 1 2017 Chrissy, Loy, Leander, Hannah, Ian 1 1 SLA, leaf area, RTD

2 cath bowler c.bowler@uq.edu.a WA 2 1 2017 Chrissy, Loy, Leander, Hannah, Ian 2 2 biomass, leaf area,

2 cath bowler c.bowler@uq.edu.a WA 2 1 2017 Chrissy, Loy, Leander, Hannah, Ian 3 3 L:S, leaf area, RTD

2 cath bowler c.bowler@uq.edu.a WA 2 1 2017 Chrissy, Loy, Leander, Hannah, Ian 4 4 SLA, height, RTD

2 cath bowler c.bowler@uq.edu.a WA 3 2 2015 Cath, Trace, Maia, Margie 1 1 SLA, leaf area, RTD

2 cath bowler c.bowler@uq.edu.a WA 3 2 2015 Cath, Trace, Maia, Margie 2 2 biomass, leaf area,

2 cath bowler c.bowler@uq.edu.a WA 3 2 2015 Cath, Trace, Maia, Margie 3 3 L:S, leaf area, RTD

2 cath bowler c.bowler@uq.edu.a WA 3 2 2015 Cath, Trace, Maia, Margie 4 4 SLA, height, RTD

2 cath bowler c.bowler@uq.edu.a WA 4 2 2016 Cath, Trace, Maia, Margie 1 1 SLA, leaf area, RTD

2 cath bowler c.bowler@uq.edu.a WA 4 2 2016 Cath, Trace, Maia, Margie 2 2 biomass, leaf area,

2 cath bowler c.bowler@uq.edu.a WA 4 2 2016 Cath, Trace, Maia, Margie 3 3 L:S, leaf area, RTD

2 cath bowler c.bowler@uq.edu.a WA 4 2 2016 Cath, Trace, Maia, Margie 4 4 SLA, height, RTD

sqlite> sqlite> select \* from projects natural join field\_season natural join traits;

project\_id researcher email site fs\_id year crew\_list trait\_id traits

---------- ------------- ----------------- ---------- ---------- ---------- ---------------------------------- ---------- -------------------

1 chrissy elmer c.elmer@uq.edu.au Tasmania 1 2016 Chrissy, Loy, Leander, Hannah, Ian 1 SLA, leaf area, RTD

1 chrissy elmer c.elmer@uq.edu.au Tasmania 2 2017 Chrissy, Loy, Leander, Hannah, Ian 2 biomass, leaf area,

2 cath bowler c.bowler@uq.edu.a WA 3 2015 Cath, Trace, Maia, Margie 3 L:S, leaf area, RTD

2 cath bowler c.bowler@uq.edu.a WA 4 2016 Cath, Trace, Maia, Margie 4 SLA, height, RTD

sqlite> select \* from projects NATURAL JOIN field\_season;

project\_id researcher email site fs\_id year crew\_list

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1 chrissy elmer c.elmer@uq.edu.au Tasmania 1 2016 Chrissy, Loy, Leander, Hannah, Ian

1 chrissy elmer c.elmer@uq.edu.au Tasmania 2 2017 Chrissy, Loy, Leander, Hannah, Ian

2 cath bowler c.bowler@uq.edu.a WA 3 2015 Cath, Trace, Maia, Margie

2 cath bowler c.bowler@uq.edu.a WA 4 2016 Cath, Trace, Maia, Margie

sqlite> select \* from projects NATURAL JOIN traits;

project\_id researcher email site trait\_id fs\_id traits

---------- ------------- ----------------- ---------- ---------- ---------- -------------------

1 chrissy elmer c.elmer@uq.edu.au Tasmania 1 1 SLA, leaf area, RTD

1 chrissy elmer c.elmer@uq.edu.au Tasmania 2 2 biomass, leaf area,

1 chrissy elmer c.elmer@uq.edu.au Tasmania 3 3 L:S, leaf area, RTD

1 chrissy elmer c.elmer@uq.edu.au Tasmania 4 4 SLA, height, RTD

2 cath bowler c.bowler@uq.edu.a WA 1 1 SLA, leaf area, RTD

2 cath bowler c.bowler@uq.edu.a WA 2 2 biomass, leaf area,

2 cath bowler c.bowler@uq.edu.a WA 3 3 L:S, leaf area, RTD

2 cath bowler c.bowler@uq.edu.a WA 4 4 SLA, height, RTD

sqlite>

sqlite> select \* from projects natural join field\_season natural join traits;

project\_id researcher email site fs\_id year crew\_list trait\_id traits

---------- ------------- ----------------- ---------- ---------- ---------- ---------------------------------- ---------- -------------------

1 chrissy elmer c.elmer@uq.edu.au Tasmania 1 2016 Chrissy, Loy, Leander, Hannah, Ian 1 SLA, leaf area, RTD

1 chrissy elmer c.elmer@uq.edu.au Tasmania 2 2017 Chrissy, Loy, Leander, Hannah, Ian 2 biomass, leaf area,

2 cath bowler c.bowler@uq.edu.a WA 3 2015 Cath, Trace, Maia, Margie 3 L:S, leaf area, RTD

2 cath bowler c.bowler@uq.edu.a WA 4 2016 Cath, Trace, Maia, Margie 4 SLA, height, RTD

sqlite> select \* from projects natural join field\_season(year, crew\_list)

...> ;

Error: near "(": syntax error

sqlite> .tables

field\_season projects traits

sqlite> CREATE TABLE site (

...> test\_trait.db id integer NOT NULL PRIMARY KEY,

...> test\_trait.db site text NOT NULL,

...> test\_trait.db area\_km2 integer,

...> test\_trait.db longitude integer,

...> test\_trait.db latitude integer,

...> test\_trait.db max\_temp integer,

...> test\_trait.db min\_temp integer,

...>

...> ;

Error: near ".": syntax error

sqlite> CREATE TABLE site (

...> id integer NOT NULL PRIMARY KEY,

...> site text NOT NULL,

...> area\_km2 integer,

...> longitude integer,

...> latitude integer,

...> max\_temp integer,

...> min\_temp integer,

...> ann\_precip\_mm integer);

sqlite> INSERT INTO site VALUES (1, bendering, 300, 152.00000, 27.00000, 2, 1, 100);

Error: no such column: bendering

sqlite> INSERT INTO site VALUES (1, 'bendering', 300, 152.00000, 27.00000, 2, 1, 100);

sqlite> INSERT INTO site (id, site) VALUES (1, 'Kunjin');

Error: UNIQUE constraint failed: site.id

sqlite> INSERT INTO site (id, site) VALUES (2, 'Kunjin');

sqlite> CREATE TABLE treatment (

...> id integer NOT NULL PRIMARY KEY,

...> treatment text NOT NULL);

sqlite> INSERT INTO treatment VALUES (1, control),

...> (2, water),

...> (3, shade),

...> (4, density\_30),

...> (5, density\_60);

Error: no such column: density\_60

sqlite> INSERT INTO treatment VALUES (1, control),

...> (2, 'water'),

...> (3, 'shade'),

...> (4, 'density\_30'),

...> (5, 'density\_60');

Error: no such column: control

sqlite> INSERT INTO treatment VALUES (1, 'control'),

...> (2, 'water'),

...> (3, 'shade'),

...> (4, 'density\_30'),

...> (5, 'density\_60');

sqlite> CREATE TABLE plot (

...> plot\_id integer PRIMARY KEY,

...> fs\_id integer NOT NULL,

...> site text NOT NULL,

...> block integer NOT NULL,

...> plot integer NOT NULL,

...> treatment text,

...> FOREIGN KEY(fs\_id) REFERENCES field\_season(fs\_id),

...> FOREIGN KEY(site) REFERENCES site(site),

...> FOREIGN KEY(treatment) REFERENCES treatment(treatment));

sqlite> INSERT INTO plot VALUES (1, 1, 1, 1, 1, 1);

sqlite> INSERT INTO plot VALUES (2, 1, 1, 1, 2, 2);

sqlite> INSERT INTO plot VALUES (3, 1, 1, 2, 1, 1);

sqlite> INSERT INTO plot VALUES (4, 1, 1, 2, 2, 2);

sqlite> select \* from project natural join field season natural join traits natural join plot;

Error: no such table: project

sqlite> select \* from projects natural join field season natural join traits natural join plot;

Error: no such table: field

sqlite> select \* from projects natural join field \_season natural join traits natural join plot;

Error: no such table: field

sqlite> select \* from projects natural join field\_season natural join traits natural join plot;

sqlite> selet \* from projects natural join field\_season natural join traits;

Error: near "selet": syntax error

sqlite> select \* from projects natural join field\_season natural join traits;

project\_id researcher email site fs\_id year crew\_list trait\_id traits

---------- ------------- ----------------- ---------- ---------- ---------- ---------------------------------- ---------- -------------------

1 chrissy elmer c.elmer@uq.edu.au Tasmania 1 2016 Chrissy, Loy, Leander, Hannah, Ian 1 SLA, leaf area, RTD

1 chrissy elmer c.elmer@uq.edu.au Tasmania 2 2017 Chrissy, Loy, Leander, Hannah, Ian 2 biomass, leaf area,

2 cath bowler c.bowler@uq.edu.a WA 3 2015 Cath, Trace, Maia, Margie 3 L:S, leaf area, RTD

2 cath bowler c.bowler@uq.edu.a WA 4 2016 Cath, Trace, Maia, Margie 4 SLA, height, RTD

sqlite> select \* from projects natural join field\_season natural join traits natural join site natural join treatment natural join plot;

sqlite> select \* from projects cross join field\_season cross join traits;

project\_id researcher email site fs\_id project\_id year crew\_list trait\_id fs\_id traits

---------- ------------- ----------------- ---------- ---------- ---------- ---------- ---------------------------------- ---------- ---------- -------------------

1 chrissy elmer c.elmer@uq.edu.au Tasmania 1 1 2016 Chrissy, Loy, Leander, Hannah, Ian 1 1 SLA, leaf area, RTD

1 chrissy elmer c.elmer@uq.edu.au Tasmania 1 1 2016 Chrissy, Loy, Leander, Hannah, Ian 2 2 biomass, leaf area,

1 chrissy elmer c.elmer@uq.edu.au Tasmania 1 1 2016 Chrissy, Loy, Leander, Hannah, Ian 3 3 L:S, leaf area, RTD

1 chrissy elmer c.elmer@uq.edu.au Tasmania 1 1 2016 Chrissy, Loy, Leander, Hannah, Ian 4 4 SLA, height, RTD

1 chrissy elmer c.elmer@uq.edu.au Tasmania 2 1 2017 Chrissy, Loy, Leander, Hannah, Ian 1 1 SLA, leaf area, RTD

1 chrissy elmer c.elmer@uq.edu.au Tasmania 2 1 2017 Chrissy, Loy, Leander, Hannah, Ian 2 2 biomass, leaf area,

1 chrissy elmer c.elmer@uq.edu.au Tasmania 2 1 2017 Chrissy, Loy, Leander, Hannah, Ian 3 3 L:S, leaf area, RTD

1 chrissy elmer c.elmer@uq.edu.au Tasmania 2 1 2017 Chrissy, Loy, Leander, Hannah, Ian 4 4 SLA, height, RTD

1 chrissy elmer c.elmer@uq.edu.au Tasmania 3 2 2015 Cath, Trace, Maia, Margie 1 1 SLA, leaf area, RTD

1 chrissy elmer c.elmer@uq.edu.au Tasmania 3 2 2015 Cath, Trace, Maia, Margie 2 2 biomass, leaf area,

1 chrissy elmer c.elmer@uq.edu.au Tasmania 3 2 2015 Cath, Trace, Maia, Margie 3 3 L:S, leaf area, RTD

1 chrissy elmer c.elmer@uq.edu.au Tasmania 3 2 2015 Cath, Trace, Maia, Margie 4 4 SLA, height, RTD

1 chrissy elmer c.elmer@uq.edu.au Tasmania 4 2 2016 Cath, Trace, Maia, Margie 1 1 SLA, leaf area, RTD

1 chrissy elmer c.elmer@uq.edu.au Tasmania 4 2 2016 Cath, Trace, Maia, Margie 2 2 biomass, leaf area,

1 chrissy elmer c.elmer@uq.edu.au Tasmania 4 2 2016 Cath, Trace, Maia, Margie 3 3 L:S, leaf area, RTD

1 chrissy elmer c.elmer@uq.edu.au Tasmania 4 2 2016 Cath, Trace, Maia, Margie 4 4 SLA, height, RTD

2 cath bowler c.bowler@uq.edu.a WA 1 1 2016 Chrissy, Loy, Leander, Hannah, Ian 1 1 SLA, leaf area, RTD

2 cath bowler c.bowler@uq.edu.a WA 1 1 2016 Chrissy, Loy, Leander, Hannah, Ian 2 2 biomass, leaf area,

2 cath bowler c.bowler@uq.edu.a WA 1 1 2016 Chrissy, Loy, Leander, Hannah, Ian 3 3 L:S, leaf area, RTD

2 cath bowler c.bowler@uq.edu.a WA 1 1 2016 Chrissy, Loy, Leander, Hannah, Ian 4 4 SLA, height, RTD

2 cath bowler c.bowler@uq.edu.a WA 2 1 2017 Chrissy, Loy, Leander, Hannah, Ian 1 1 SLA, leaf area, RTD

2 cath bowler c.bowler@uq.edu.a WA 2 1 2017 Chrissy, Loy, Leander, Hannah, Ian 2 2 biomass, leaf area,

2 cath bowler c.bowler@uq.edu.a WA 2 1 2017 Chrissy, Loy, Leander, Hannah, Ian 3 3 L:S, leaf area, RTD

2 cath bowler c.bowler@uq.edu.a WA 2 1 2017 Chrissy, Loy, Leander, Hannah, Ian 4 4 SLA, height, RTD

2 cath bowler c.bowler@uq.edu.a WA 3 2 2015 Cath, Trace, Maia, Margie 1 1 SLA, leaf area, RTD

2 cath bowler c.bowler@uq.edu.a WA 3 2 2015 Cath, Trace, Maia, Margie 2 2 biomass, leaf area,

2 cath bowler c.bowler@uq.edu.a WA 3 2 2015 Cath, Trace, Maia, Margie 3 3 L:S, leaf area, RTD

2 cath bowler c.bowler@uq.edu.a WA 3 2 2015 Cath, Trace, Maia, Margie 4 4 SLA, height, RTD

2 cath bowler c.bowler@uq.edu.a WA 4 2 2016 Cath, Trace, Maia, Margie 1 1 SLA, leaf area, RTD

2 cath bowler c.bowler@uq.edu.a WA 4 2 2016 Cath, Trace, Maia, Margie 2 2 biomass, leaf area,

2 cath bowler c.bowler@uq.edu.a WA 4 2 2016 Cath, Trace, Maia, Margie 3 3 L:S, leaf area, RTD

2 cath bowler c.bowler@uq.edu.a WA 4 2 2016 Cath, Trace, Maia, Margie 4 4 SLA, height, RTD

sqlite> sqlite> .tables

field\_season projects traits

plot site treatment

sqlite> select \* from plot;

plot\_id fs\_id site block plot treatment

---------- ---------- ---------- ---------- ---------- ----------

1 1 1 1 1 1

2 1 1 1 2 2

3 1 1 2 1 1

4 1 1 2 2 2

sqlite> select \* from plot natural join treatment;

sqlite> select \* from treatment;

id treatment

---------- ----------

1 control

2 water

3 shade

4 density\_30

5 density\_60

sqlite> select\* from treatment natural join plot;

sqlite> select \* from treatment natural join plot;

sqlite> select \* from sqlite\_master;

type name tbl\_name rootpage sql

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table projects projects 2 CREATE TABLE projects (

project\_id integer PRIMARY KEY,

researcher text NOT NULL,

email text NOT NULL,

site text NOT NULL)

table field\_seas field\_seas 3 CREATE TABLE field\_season (

fs\_id integer PRIMARY KEY,

project\_id integer,

year integer NOT NULL,

crew\_list text NOT NUll

table traits traits 4 CREATE TABLE traits (

trait\_id integer PRIMARY KEY,

fs\_id integer,

traits text NOT NULL,

FOREIGN KEY(fs\_id) REFERENCES fie

table site site 5 CREATE TABLE site (

id integer NOT NULL PRIMARY KEY,

site text NOT NULL,

area\_km2 integer,

longitude integer,

latitude inte

table treatment treatment 6 CREATE TABLE treatment (

id integer NOT NULL PRIMARY KEY,

treatment text NOT NULL)

table plot plot 7 CREATE TABLE plot (

plot\_id integer PRIMARY KEY,

fs\_id integer NOT NULL,

site text NOT NULL,

block integer NOT NULL,

plot int

sqlite> REATE TABLE plot (

...> plot\_id integer PRIMARY KEY,

...> fs\_id integer NOT NULL,

...> site text NOT NULL,

...> block integer NOT NULL,

...> plot integer NOT NULL,

...> treatment text,

...> FOREIGN KEY(fs\_id) REFERENCES field\_season(fs\_id),

...> FOREIGN KEY(site) REFERENCES site(site),

...> FOREIGN KEY(treatment) REFERENCES treatment(id));

Error: near "REATE": syntax error

sqlite> CREATE TABLE plot (

...> plot\_id integer PRIMARY KEY,

...> fs\_id integer NOT NULL,

...> site text NOT NULL,

...> block integer NOT NULL,

...> plot integer NOT NULL,

...> treatment text,

...> FOREIGN KEY(fs\_id) REFERENCES field\_season(fs\_id),

...> FOREIGN KEY(site) REFERENCES site(site),

...> FOREIGN KEY(treatment) REFERENCES treatment(id));

Error: table plot already exists

sqlite> drop table plot

...> ;

sqlite> CREATE TABLE plot (

...> plot\_id integer PRIMARY KEY,

...> fs\_id integer NOT NULL,

...> site text NOT NULL,

...> block integer NOT NULL,

...> plot integer NOT NULL,

...> treatment text,

...> FOREIGN KEY(fs\_id) REFERENCES field\_season(fs\_id),

...> FOREIGN KEY(site) REFERENCES site(site),

...> FOREIGN KEY(treatment) REFERENCES treatment(id));

sqlite> INSERT INTO plot VALUES (1, 1, 1, 1, 1, 1);

sqlite> INSERT INTO plot VALUES (2, 1, 1, 1, 2, 2);

sqlite> INSERT INTO plot VALUES (3, 1, 1, 2, 1, 1);

sqlite> INSERT INTO plot VALUES (4, 1, 1, 2, 2, 2);

sqlite> select \* from plot natural join treatment;

sqlite> select \* from plot;

plot\_id fs\_id site block plot treatment

---------- ---------- ---------- ---------- ---------- ----------

1 1 1 1 1 1

2 1 1 1 2 2

3 1 1 2 1 1

4 1 1 2 2 2

sqlite> select \* from treatment;

id treatment

---------- ----------

1 control

2 water

3 shade

4 density\_30

5 density\_60

sqlite> select \* from site;

id site area\_km2 longitude latitude max\_temp min\_temp ann\_precip\_mm

---------- ---------- ---------- ---------- ---------- ---------- ---------- -------------

1 bendering 300 152 27 2 1 100

2 Kunjin

sqlite> select \* from plot natural join site;

sqlite> select \* from plot cross join site;

plot\_id fs\_id site block plot treatment id site area\_km2 longitude latitude max\_temp min\_temp ann\_precip\_mm

---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- -------------

1 1 1 1 1 1 1 bendering 300 152 27 2 1 100

1 1 1 1 1 1 2 Kunjin

2 1 1 1 2 2 1 bendering 300 152 27 2 1 100

2 1 1 1 2 2 2 Kunjin

3 1 1 2 1 1 1 bendering 300 152 27 2 1 100

3 1 1 2 1 1 2 Kunjin

4 1 1 2 2 2 1 bendering 300 152 27 2 1 100

4 1 1 2 2 2 2 Kunjin

sqlite> select \* from plot inner join site;

plot\_id fs\_id site block plot treatment id site area\_km2 longitude latitude max\_temp min\_temp ann\_precip\_mm

---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- -------------

1 1 1 1 1 1 1 bendering 300 152 27 2 1 100

1 1 1 1 1 1 2 Kunjin

2 1 1 1 2 2 1 bendering 300 152 27 2 1 100

2 1 1 1 2 2 2 Kunjin

3 1 1 2 1 1 1 bendering 300 152 27 2 1 100

3 1 1 2 1 1 2 Kunjin

4 1 1 2 2 2 1 bendering 300 152 27 2 1 100

4 1 1 2 2 2 2 Kunjin

sqlite> select \* from plot join site;

plot\_id fs\_id site block plot treatment id site area\_km2 longitude latitude max\_temp min\_temp ann\_precip\_mm

---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- -------------

1 1 1 1 1 1 1 bendering 300 152 27 2 1 100

1 1 1 1 1 1 2 Kunjin

2 1 1 1 2 2 1 bendering 300 152 27 2 1 100

2 1 1 1 2 2 2 Kunjin

3 1 1 2 1 1 1 bendering 300 152 27 2 1 100

3 1 1 2 1 1 2 Kunjin

4 1 1 2 2 2 1 bendering 300 152 27 2 1 100

4 1 1 2 2 2 2 Kunjin

sqlite> select \* from site

...> ;

id site area\_km2 longitude latitude max\_temp min\_temp ann\_precip\_mm

---------- ---------- ---------- ---------- ---------- ---------- ---------- -------------

1 bendering 300 152 27 2 1 100

2 Kunjin

sqlite> select\* from plot;

plot\_id fs\_id site block plot treatment

---------- ---------- ---------- ---------- ---------- ----------

1 1 1 1 1 1

2 1 1 1 2 2

3 1 1 2 1 1

4 1 1 2 2 2

sqlite> INSERT INTO plot VALUES (2, 1, 2, 1, 2, 2), (2, 2, 2, 1, 2, 2), (2, 1, 2, 1, 1, 1);\

...> ;

Error: UNIQUE constraint failed: plot.plot\_id

sqlite> INSERT INTO plot VALUES (2, 1, 2, 1, 2, 2), (2, 2, 2, 1, 2, 2), (2, 1, 2, 1, 1, 1);

Error: UNIQUE constraint failed: plot.plot\_id

sqlite> INSERT INTO plot VALUES (5, 1, 2, 1, 2, 2), (6, 2, 2, 1, 2, 2), (7, 1, 2, 1, 1, 1);

sqlite> select\* from plot;

plot\_id fs\_id site block plot treatment

---------- ---------- ---------- ---------- ---------- ----------

1 1 1 1 1 1

2 1 1 1 2 2

3 1 1 2 1 1

4 1 1 2 2 2

5 1 2 1 2 2

6 2 2 1 2 2

7 1 2 1 1 1

sqlite> select block, plot from plot;

block plot

---------- ----------

1 1

1 2

2 1

2 2

1 2

1 2

1 1

sqlite> select block, plot from plot join treatment;

block plot

---------- ----------

1 1

1 1

1 1

1 1

1 1

1 2

1 2

1 2

1 2

1 2

2 1

2 1

2 1

2 1

2 1

2 2

2 2

2 2

2 2

2 2

1 2

1 2

1 2

1 2

1 2

1 2

1 2

1 2

1 2

1 2

1 1

1 1

1 1

1 1

1 1

sqlite> select block, plot, site, treatment from plot outer join treatment on plot.site = treatment.id;

Error: RIGHT and FULL OUTER JOINs are not currently supported

sqlite> sqlite> select block, plot, site, treatment from plot left outer join treatment on plot.site = treatment.id;

Error: ambiguous column name: treatment

sqlite> select block, plot, site, treatment.treatment from plot left outer join treatment on plot.site = treatment.id;

block plot site treatment

---------- ---------- ---------- ----------

1 1 1 control

1 2 1 control

2 1 1 control

2 2 1 control

1 2 2 water

1 2 2 water

1 1 2 water

sqlite> select block, plot, site, treatment.treatment from plot left outer join treatment on plot.treatment = treatment.id;

block plot site treatment

---------- ---------- ---------- ----------

1 1 1 control

1 2 1 water

2 1 1 control

2 2 1 water

1 2 2 water

1 2 2 water

1 1 2 control

sqlite> select block, plot, site, treatment.treatment from plot left outer join treatment on plot.treatment = treatment.id left outer join site on plot.site = site.id;

Error: ambiguous column name: site

sqlite> select block, plot, site.site, treatment.treatment from plot left outer join treatment on plot.treatment = treatment.id left outer join site on plot.site = site.id;

block plot site treatment

---------- ---------- ---------- ----------

1 1 bendering control

1 2 bendering water

2 1 bendering control

2 2 bendering water

1 2 Kunjin water

1 2 Kunjin water

1 1 Kunjin control

sqlite> select block, plot, site.site, treatment.treatment from plot left outer join treatment on plot.treatment = treatment.id left outer join site on plot.site = site.id;

block plot site treatment

---------- ---------- ---------- ----------

1 1 bendering control

1 2 bendering water

2 1 bendering control

2 2 bendering water

1 2 Kunjin water

1 2 Kunjin water

1 1 Kunjin control

sqlite> SELECT block, plot, plot.site, plot.treatment FROM plot

...> LEFT OUTER JOIN treatment ON plot.treatment = treatment.id

...> LEFT OUTER JOIN site ON plot.site = site.id;

block plot site treatment

---------- ---------- ---------- ----------

1 1 1 1

1 2 1 2

2 1 1 1

2 2 1 2

1 2 2 2

1 2 2 2

1 1 2 1

sqlite> SELECT block, plot, site.site, treatment.treatment FROM plot;

Error: no such column: site.site

sqlite> SELECT block, plot, site.site, treatment.treatment FROM plot

...> LEFT OUTER JOIN treatment ON plot.treatment = treatment.id

...> LEFT OUTER JOIN site ON plot.site = site.id;

block plot site treatment

---------- ---------- ---------- ----------

1 1 bendering control

1 2 bendering water

2 1 bendering control

2 2 bendering water

1 2 Kunjin water

1 2 Kunjin water

1 1 Kunjin control

sqlite> SELECT field\_season.year, block, plot, site.site, treatment.treatment FROM plot

...> LEFT OUTER JOIN treatment ON plot.treatment = treatment.id

...> LEFT OUTER JOIN site ON plot.site = site.id

...> natural join field\_season (year, crew\_list);

Error: near "(": syntax error

sqlite> SELECT field\_season.year, block, plot, site.site, treatment.treatment FROM plot

...> LEFT OUTER JOIN treatment ON plot.treatment = treatment.id

...> LEFT OUTER JOIN site ON plot.site = site.id

...> natural join field\_season year, crew\_list;

Error: no such table: crew\_list

sqlite> SELECT field\_season.year, block, plot, site.site, treatment.treatment FROM plot

...> LEFT OUTER JOIN treatment ON plot.treatment = treatment.id

...> LEFT OUTER JOIN site ON plot.site = site.id

...> natural join field\_season.year, field\_season.crew\_list;

Error: no such table: field\_season.year

sqlite> SELECT block, plot, site.site, treatment.treatment FROM plot

...> LEFT OUTER JOIN treatment ON plot.treatment = treatment.id

...> LEFT OUTER JOIN site ON plot.site = site.id;

block plot site treatment

---------- ---------- ---------- ----------

1 1 bendering control

1 2 bendering water

2 1 bendering control

2 2 bendering water

1 2 Kunjin water

1 2 Kunjin water

1 1 Kunjin control

sqlite> .tables

field\_season projects traits

plot site treatment

sqlite> select \* from projects natural join field\_season natural join traits;

project\_id researcher email site fs\_id year crew\_list trait\_id traits

---------- ------------- ----------------- ---------- ---------- ---------- ---------------------------------- ---------- -------------------

1 chrissy elmer c.elmer@uq.edu.au Tasmania 1 2016 Chrissy, Loy, Leander, Hannah, Ian 1 SLA, leaf area, RTD

1 chrissy elmer c.elmer@uq.edu.au Tasmania 2 2017 Chrissy, Loy, Leander, Hannah, Ian 2 biomass, leaf area,

2 cath bowler c.bowler@uq.edu.a WA 3 2015 Cath, Trace, Maia, Margie 3 L:S, leaf area, RTD

2 cath bowler c.bowler@uq.edu.a WA 4 2016 Cath, Trace, Maia, Margie 4 SLA, height, RTD

sqlite> select \* projects cross join field\_season;

Error: near "projects": syntax error

sqlite> select \* from projects cross join field\_season;

project\_id researcher email site fs\_id project\_id year crew\_list

---------- ------------- ----------------- ---------- ---------- ---------- ---------- ----------------------------------

1 chrissy elmer c.elmer@uq.edu.au Tasmania 1 1 2016 Chrissy, Loy, Leander, Hannah, Ian

1 chrissy elmer c.elmer@uq.edu.au Tasmania 2 1 2017 Chrissy, Loy, Leander, Hannah, Ian

1 chrissy elmer c.elmer@uq.edu.au Tasmania 3 2 2015 Cath, Trace, Maia, Margie

1 chrissy elmer c.elmer@uq.edu.au Tasmania 4 2 2016 Cath, Trace, Maia, Margie

2 cath bowler c.bowler@uq.edu.a WA 1 1 2016 Chrissy, Loy, Leander, Hannah, Ian

2 cath bowler c.bowler@uq.edu.a WA 2 1 2017 Chrissy, Loy, Leander, Hannah, Ian

2 cath bowler c.bowler@uq.edu.a WA 3 2 2015 Cath, Trace, Maia, Margie

2 cath bowler c.bowler@uq.edu.a WA 4 2 2016 Cath, Trace, Maia, Margie

sqlite> SELECT block, plot, site.site, treatment.treatment FROM plot

...> LEFT OUTER JOIN treatment ON plot.treatment = treatment.id

...> LEFT OUTER JOIN site ON plot.site = site.id;

block plot site treatment

---------- ---------- ---------- ----------

1 1 bendering control

1 2 bendering water

2 1 bendering control

2 2 bendering water

1 2 Kunjin water

1 2 Kunjin water

1 1 Kunjin control

sqlite> .tables

field\_season projects traits

plot site treatment

sqlite>

[2]+ Stopped sqlite3 test\_trait.db

margiemayfield@d-i184-17-145:~/Google Drive/FunctionalTraitDatabase/test\_trait\_database$

[Restored 31 May 2017, 9:56:49 AM]

Last login: Wed May 31 07:59:24 on console

Restored session: Tue 30 May 2017 16:42:06 AEST

margiemayfield@d-i184-17-145:~/Google Drive/FunctionalTraitDatabase/test\_trait\_database$ /Users/margiemayfield/Google\ Drive/Cath\ Honours\ 2017/Code

[Restored 1 Jun 2017, 9:19:34 AM]

Last login: Thu Jun 1 08:29:15 on console

Restored session: Wed 31 May 2017 16:12:56 AEST

margiemayfield@d-i184-17-145:~/Google Drive/FunctionalTraitDatabase/test\_trait\_database$ cd..

-bash: cd..: command not found

margiemayfield@d-i184-17-145:~/Google Drive/FunctionalTraitDatabase/test\_trait\_database$ cd ..

margiemayfield@d-i184-17-145:~/Google Drive/FunctionalTraitDatabase$ cd ~

margiemayfield@d-i184-17-145:~$ ls

Applications/ Downloads/ Dropbox (Old (2))/ Library/ Pictures/ Sites/

Desktop/ Dropbox/ Dropbox (Old)/ Movies/ Public/ test.grd

Documents/ Dropbox (Old (1))/ Google Drive/ Music/ Send Registration@ test.gri

margiemayfield@d-i184-17-145:~$ cd Applications/

margiemayfield@d-i184-17-145:~/Applications$ ls

margiemayfield@d-i184-17-145:~/Applications$ cd /Applications/Utilities

margiemayfield@d-i184-17-145:/Applications/Utilities$ ls

Activity Monitor.app/ AirPort Utility.app/ Digital Color Meter.app/ Script Editor.app/

Adobe Application Manager/ Audio MIDI Setup.app/ Disk Utility.app/ System Information.app/

Adobe Creative Cloud/ Bluetooth File Exchange.app/ Grab.app/ Terminal.app/

Adobe Flash Player Install Manager.app/ Boot Camp Assistant.app/ Grapher.app/ VoiceOver Utility.app/

Adobe Installers/ ColorSync Utility.app/ Keychain Access.app/ X11.app/

Adobe Utilities.localized/ Console.app/ Migration Assistant.app/ iMac EFI Firmware Update.app/

margiemayfield@d-i184-17-145:/Applications/Utilities$ defaults write com.apple.finder AppleShowAllFiles YES

margiemayfield@d-i184-17-145:/Applications/Utilities$ defaults write com.apple.finder AppleShowAllFiles YES

[Restored 5 Jun 2017, 3:01:55 PM]

Last login: Mon Jun 5 08:54:42 on console

Restored session: Thu 1 Jun 2017 16:20:00 AEST

margiemayfield@d-i184-17-203:/Applications/Utilities$ R

R version 3.3.3 (2017-03-06) -- "Another Canoe"

Copyright (C) 2017 The R Foundation for Statistical Computing

Platform: x86\_64-apple-darwin13.4.0 (64-bit)

R is free software and comes with ABSOLUTELY NO WARRANTY.

You are welcome to redistribute it under certain conditions.

Type 'license()' or 'licence()' for distribution details.

Natural language support but running in an English locale

R is a collaborative project with many contributors.

Type 'contributors()' for more information and

'citation()' on how to cite R or R packages in publications.

Type 'demo()' for some demos, 'help()' for on-line help, or

'help.start()' for an HTML browser interface to help.

Type 'q()' to quit R.

> q()

Save workspace image? [y/n/c]: n

margiemayfield@d-i184-17-203:/Applications/Utilities$

[Restored 7 Jun 2017, 2:58:09 PM]

Last login: Wed Jun 7 08:24:06 on console

Restored session: Mon 5 Jun 2017 15:28:03 AEST

margiemayfield@d-i184-17-203:/Applications/Utilities$ /Users/margiemayfield/Google\ Drive/Cath\ Honours\ 2017/caths\_r\_stuff\

[Restored 8 Jun 2017, 11:55:12 AM]

Last login: Thu Jun 8 08:27:11 on console

Restored session: Wed 7 Jun 2017 16:11:22 AEST

margiemayfield@d-i184-17-203:/Applications/Utilities$ cd

margiemayfield@d-i184-17-203:~$ ls

Applications/ Downloads/ Dropbox (Old (2))/ Library/ Pictures/ Sites/

Desktop/ Dropbox/ Dropbox (Old)/ Movies/ Public/ test.grd

Documents/ Dropbox (Old (1))/ Google Drive/ Music/ Send Registration@ test.gri

margiemayfield@d-i184-17-203:~$ cd Google\ Drive/

margiemayfield@d-i184-17-203:~/Google Drive$ ls

Admin Documents/ Higher Order Interactions/ Old assignments/ Western Australia Coexistence/

Cath Honours 2017/ Icon? PJ Fair prices.rtf using.sqlite.oreilly.2010.pdf

Code/ LaTeX/ PyCharm/ ~$\_academic-portfolio-formA\_2017.docx

FunctionalTraitDatabase/ Lab meetings/ Spatial Ecology/

Gender Study 2017/ Margie\_promotion/ Timesheets/

Getting started Mayfield Media/ WA 2017/

margiemayfield@d-i184-17-203:~/Google Drive$ cd FunctionalTraitDatabase/

margiemayfield@d-i184-17-203:~/Google Drive/FunctionalTraitDatabase$ ls

create\_database\_structure.sql db\_structure.png table poster.tiff test\_trait\_database/ traitdb\_concept\_map2.png

database\_structure.txt sqliteTutorial.sql table structure.pptx testdb.db

margiemayfield@d-i184-17-203:~/Google Drive/FunctionalTraitDatabase$ cd test\_trait\_database/

margiemayfield@d-i184-17-203:~/Google Drive/FunctionalTraitDatabase/test\_trait\_database$ sqlite3 test\_trait.db

SQLite version 3.8.10.2 2015-05-20 18:17:19

Enter ".help" for usage hints.

sqlite> tables

...> ;

Error: near "tables": syntax error

sqlite> .tables;

Error: unknown command or invalid arguments: "tables;". Enter ".help" for help

sqlite> .tables;

Error: unknown command or invalid arguments: "tables;". Enter ".help" for help

sqlite> .tables

field\_season projects traits

plot site treatment

sqlite> select \* from projects;

1|chrissy elmer|c.elmer@uq.edu.au|Tasmania

2|cath bowler|c.bowler@uq.edu.au|WA

sqlite> .headers on

sqlite> .mode columns

sqlite> select \* from projects;

project\_id researcher email site

---------- ------------- ----------------- ----------

1 chrissy elmer c.elmer@uq.edu.au Tasmania

2 cath bowler c.bowler@uq.edu.a WA

sqlite> delete from projects where site = WA;

Error: no such column: WA

sqlite> INSERT INTO projects VALUES

...> ('Claire Wainwright; Hao Ran', 'claire.wainwright@uq.net.au', 'BEND1'),

...> ('Hao Ran; Steph', '', 'BEND1'),

...> ('Claire Wainwright' 'claire.wainwright@uq.net.au', 'DENS1');

Error: near "'claire.wainwright@uq.net.au'": syntax error

sqlite> INSERT INTO projects VALUES

...> ('Claire Wainwright; Hao Ran', 'claire.wainwright@uq.net.au', 'BEND1'),

...> ('Hao Ran; Steph', '', 'BEND1'),

...> ('Claire Wainwright', 'claire.wainwright@uq.net.au', 'DENS1');

Error: table projects has 4 columns but 3 values were supplied

sqlite> select \* from projects;

project\_id researcher email site

---------- ------------- ----------------- ----------

1 chrissy elmer c.elmer@uq.edu.au Tasmania

2 cath bowler c.bowler@uq.edu.a WA

sqlite> INSERT INTO projects VALUES

...> (3, 'Claire Wainwright; Hao Ran', 'claire.wainwright@uq.net.au', 'BEND1'),

...> (4, 'Hao Ran; Steph', '', 'BEND1'),

...> (5, 'Claire Wainwright', 'claire.wainwright@uq.net.au', 'DENS1');

sqlite> select \* from projects;

project\_id researcher email site

---------- ------------- ----------------- ----------

1 chrissy elmer c.elmer@uq.edu.au Tasmania

2 cath bowler c.bowler@uq.edu.a WA

3 Claire Wainwr claire.wainwright BEND1

4 Hao Ran; Step BEND1

5 Claire Wainwr claire.wainwright DENS1

sqlite> UPDATE projects SET site = 'BROM1' WHERE project\_id = 4;

sqlite> select \* from projects;

project\_id researcher email site

---------- ------------- ----------------- ----------

1 chrissy elmer c.elmer@uq.edu.au Tasmania

2 cath bowler c.bowler@uq.edu.a WA

3 Claire Wainwr claire.wainwright BEND1

4 Hao Ran; Step BROM1

5 Claire Wainwr claire.wainwright DENS1

sqlite>

[Restored 12 Jun 2017, 4:31:30 PM]

Last login: Mon Jun 12 08:33:01 on console

Restored session: Thu 8 Jun 2017 16:23:21 AEST

margiemayfield@d-i184-17-203:~/Google Drive/FunctionalTraitDatabase/test\_trait\_database$ sqlite3 test\_trait.db

SQLite version 3.8.10.2 2015-05-20 18:17:19

Enter ".help" for usage hints.

sqlite> .tables

field\_season projects traits

plot site treatment

sqlite> select \* from projects union select \* from field\_season;

1|1|2016|Chrissy, Loy, Leander, Hannah, Ian

1|chrissy elmer|c.elmer@uq.edu.au|Tasmania

2|1|2017|Chrissy, Loy, Leander, Hannah, Ian

2|cath bowler|c.bowler@uq.edu.au|WA

3|2|2015|Cath, Trace, Maia, Margie

3|Claire Wainwright; Hao Ran|claire.wainwright@uq.net.au|BEND1

4|2|2016|Cath, Trace, Maia, Margie

4|Hao Ran; Steph||BROM1

5|Claire Wainwright|claire.wainwright@uq.net.au|DENS1

sqlite> .headers on

sqlite> .mode columns

sqlite> select \* from projects union select \* from field\_season;

project\_id researcher email site

---------- ---------- ---------- ----------------------------------

1 1 2016 Chrissy, Loy, Leander, Hannah, Ian

1 chrissy el c.elmer@uq Tasmania

2 1 2017 Chrissy, Loy, Leander, Hannah, Ian

2 cath bowle c.bowler@u WA

3 2 2015 Cath, Trace, Maia, Margie

3 Claire Wai claire.wai BEND1

4 2 2016 Cath, Trace, Maia, Margie

4 Hao Ran; S BROM1

5 Claire Wai claire.wai DENS1

sqlite> select \* from projects join select \* from field\_season;

Error: near "select": syntax error

sqlite> select \* from projects cross join field\_season;

project\_id researcher email site fs\_id project\_id year crew\_list

---------- ------------- ----------------- ---------- ---------- ---------- ---------- ----------------------------------

1 chrissy elmer c.elmer@uq.edu.au Tasmania 1 1 2016 Chrissy, Loy, Leander, Hannah, Ian

1 chrissy elmer c.elmer@uq.edu.au Tasmania 2 1 2017 Chrissy, Loy, Leander, Hannah, Ian

1 chrissy elmer c.elmer@uq.edu.au Tasmania 3 2 2015 Cath, Trace, Maia, Margie

1 chrissy elmer c.elmer@uq.edu.au Tasmania 4 2 2016 Cath, Trace, Maia, Margie

2 cath bowler c.bowler@uq.edu.a WA 1 1 2016 Chrissy, Loy, Leander, Hannah, Ian

2 cath bowler c.bowler@uq.edu.a WA 2 1 2017 Chrissy, Loy, Leander, Hannah, Ian

2 cath bowler c.bowler@uq.edu.a WA 3 2 2015 Cath, Trace, Maia, Margie

2 cath bowler c.bowler@uq.edu.a WA 4 2 2016 Cath, Trace, Maia, Margie

3 Claire Wainwr claire.wainwright BEND1 1 1 2016 Chrissy, Loy, Leander, Hannah, Ian

3 Claire Wainwr claire.wainwright BEND1 2 1 2017 Chrissy, Loy, Leander, Hannah, Ian

3 Claire Wainwr claire.wainwright BEND1 3 2 2015 Cath, Trace, Maia, Margie

3 Claire Wainwr claire.wainwright BEND1 4 2 2016 Cath, Trace, Maia, Margie

4 Hao Ran; Step BROM1 1 1 2016 Chrissy, Loy, Leander, Hannah, Ian

4 Hao Ran; Step BROM1 2 1 2017 Chrissy, Loy, Leander, Hannah, Ian

4 Hao Ran; Step BROM1 3 2 2015 Cath, Trace, Maia, Margie

4 Hao Ran; Step BROM1 4 2 2016 Cath, Trace, Maia, Margie

5 Claire Wainwr claire.wainwright DENS1 1 1 2016 Chrissy, Loy, Leander, Hannah, Ian

5 Claire Wainwr claire.wainwright DENS1 2 1 2017 Chrissy, Loy, Leander, Hannah, Ian

5 Claire Wainwr claire.wainwright DENS1 3 2 2015 Cath, Trace, Maia, Margie

5 Claire Wainwr claire.wainwright DENS1 4 2 2016 Cath, Trace, Maia, Margie

sqlite> select \* from projects natural join field\_season;

project\_id researcher email site fs\_id year crew\_list

---------- ------------- ----------------- ---------- ---------- ---------- ----------------------------------

1 chrissy elmer c.elmer@uq.edu.au Tasmania 1 2016 Chrissy, Loy, Leander, Hannah, Ian

1 chrissy elmer c.elmer@uq.edu.au Tasmania 2 2017 Chrissy, Loy, Leander, Hannah, Ian

2 cath bowler c.bowler@uq.edu.a WA 3 2015 Cath, Trace, Maia, Margie

2 cath bowler c.bowler@uq.edu.a WA 4 2016 Cath, Trace, Maia, Margie

sqlite> select \* from projects natural join field\_season natural join trait summary;

Error: no such table: trait

sqlite> select \* from projects natural join field\_season natural join trait\_summary;

Error: no such table: trait\_summary

sqlite> .tables

field\_season projects traits

plot site treatment

sqlite> select \* from traits;

trait\_id fs\_id traits

---------- ---------- -------------------

1 1 SLA, leaf area, RTD

2 2 biomass, leaf area,

3 3 L:S, leaf area, RTD

4 4 SLA, height, RTD

sqlite> alter table traits rename trait\_summary;

Error: near "trait\_summary": syntax error

sqlite> alter table traits rename to trait\_summary;

sqlite> .tables

field\_season projects trait\_summary

plot site treatment

sqlite> select \* from trait\_summary

...> ;

trait\_id fs\_id traits

---------- ---------- -------------------

1 1 SLA, leaf area, RTD

2 2 biomass, leaf area,

3 3 L:S, leaf area, RTD

4 4 SLA, height, RTD

sqlite> select \* from projects natural join field\_season natural join trait\_summary;

project\_id researcher email site fs\_id year crew\_list trait\_id traits

---------- ------------- ----------------- ---------- ---------- ---------- ---------------------------------- ---------- -------------------

1 chrissy elmer c.elmer@uq.edu.au Tasmania 1 2016 Chrissy, Loy, Leander, Hannah, Ian 1 SLA, leaf area, RTD

1 chrissy elmer c.elmer@uq.edu.au Tasmania 2 2017 Chrissy, Loy, Leander, Hannah, Ian 2 biomass, leaf area,

2 cath bowler c.bowler@uq.edu.a WA 3 2015 Cath, Trace, Maia, Margie 3 L:S, leaf area, RTD

2 cath bowler c.bowler@uq.edu.a WA 4 2016 Cath, Trace, Maia, Margie 4 SLA, height, RTD

sqlite> select \* from projects natural join field\_season natural join trait\_summary natural join plot;

sqlite> select \* from projects natural join field\_season natural join trait\_summary natural join plot natural join site natural join treatment;

sqlite> .tables

field\_season projects trait\_summary

plot site treatment

sqlite> select \* from plot natural join treatment;

sqlite> selectv \* from plot;

Error: near "selectv": syntax error

sqlite> select \* from plot;

plot\_id fs\_id site block plot treatment

---------- ---------- ---------- ---------- ---------- ----------

1 1 1 1 1 1

2 1 1 1 2 2

3 1 1 2 1 1

4 1 1 2 2 2

5 1 2 1 2 2

6 2 2 1 2 2

7 1 2 1 1 1

sqlite> drop plot from plot;

Error: near "plot": syntax error

sqlite> select \* from plot natural join site;

sqlite> select \* from site;

id site area\_km2 longitude latitude max\_temp min\_temp ann\_precip\_mm

---------- ---------- ---------- ---------- ---------- ---------- ---------- -------------

1 bendering 300 152 27 2 1 100

2 Kunjin

sqlite> .schema plot

CREATE TABLE plot (

plot\_id integer PRIMARY KEY,

fs\_id integer NOT NULL,

site text NOT NULL,

block integer NOT NULL,

plot integer NOT NULL,

treatment text,

FOREIGN KEY(fs\_id) REFERENCES field\_season(fs\_id),

FOREIGN KEY(site) REFERENCES site(site),

FOREIGN KEY(treatment) REFERENCES treatment(id));

sqlite>

[Restored 13 Jun 2017, 1:49:22 PM]

Last login: Tue Jun 13 08:49:57 on console

Restored session: Mon 12 Jun 2017 17:05:57 AEST

margiemayfield@d-i184-17-203:~/Google Drive/FunctionalTraitDatabase/test\_trait\_database$ sqlite3 test\_trait.db

SQLite version 3.8.10.2 2015-05-20 18:17:19

Enter ".help" for usage hints.

sqlite> select \* from plot;

1|1|1|1|1|1

2|1|1|1|2|2

3|1|1|2|1|1

4|1|1|2|2|2

5|1|2|1|2|2

6|2|2|1|2|2

7|1|2|1|1|1

sqlite> .tables

field\_season projects trait\_summary

plot site treatment

sqlite> select \* from projects join field\_season;

1|chrissy elmer|c.elmer@uq.edu.au|Tasmania|1|1|2016|Chrissy, Loy, Leander, Hannah, Ian

1|chrissy elmer|c.elmer@uq.edu.au|Tasmania|2|1|2017|Chrissy, Loy, Leander, Hannah, Ian

1|chrissy elmer|c.elmer@uq.edu.au|Tasmania|3|2|2015|Cath, Trace, Maia, Margie

1|chrissy elmer|c.elmer@uq.edu.au|Tasmania|4|2|2016|Cath, Trace, Maia, Margie

2|cath bowler|c.bowler@uq.edu.au|WA|1|1|2016|Chrissy, Loy, Leander, Hannah, Ian

2|cath bowler|c.bowler@uq.edu.au|WA|2|1|2017|Chrissy, Loy, Leander, Hannah, Ian

2|cath bowler|c.bowler@uq.edu.au|WA|3|2|2015|Cath, Trace, Maia, Margie

2|cath bowler|c.bowler@uq.edu.au|WA|4|2|2016|Cath, Trace, Maia, Margie

3|Claire Wainwright; Hao Ran|claire.wainwright@uq.net.au|BEND1|1|1|2016|Chrissy, Loy, Leander, Hannah, Ian

3|Claire Wainwright; Hao Ran|claire.wainwright@uq.net.au|BEND1|2|1|2017|Chrissy, Loy, Leander, Hannah, Ian

3|Claire Wainwright; Hao Ran|claire.wainwright@uq.net.au|BEND1|3|2|2015|Cath, Trace, Maia, Margie

3|Claire Wainwright; Hao Ran|claire.wainwright@uq.net.au|BEND1|4|2|2016|Cath, Trace, Maia, Margie

4|Hao Ran; Steph||BROM1|1|1|2016|Chrissy, Loy, Leander, Hannah, Ian

4|Hao Ran; Steph||BROM1|2|1|2017|Chrissy, Loy, Leander, Hannah, Ian

4|Hao Ran; Steph||BROM1|3|2|2015|Cath, Trace, Maia, Margie

4|Hao Ran; Steph||BROM1|4|2|2016|Cath, Trace, Maia, Margie

5|Claire Wainwright|claire.wainwright@uq.net.au|DENS1|1|1|2016|Chrissy, Loy, Leander, Hannah, Ian

5|Claire Wainwright|claire.wainwright@uq.net.au|DENS1|2|1|2017|Chrissy, Loy, Leander, Hannah, Ian

5|Claire Wainwright|claire.wainwright@uq.net.au|DENS1|3|2|2015|Cath, Trace, Maia, Margie

5|Claire Wainwright|claire.wainwright@uq.net.au|DENS1|4|2|2016|Cath, Trace, Maia, Margie

sqlite> .headers on

sqlite> .mode columns

sqlite> select \* from projects join field\_season;

project\_id researcher email site fs\_id project\_id year crew\_list

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1 chrissy elmer c.elmer@uq.edu.au Tasmania 1 1 2016 Chrissy, Loy, Leander, Hannah, Ian

1 chrissy elmer c.elmer@uq.edu.au Tasmania 2 1 2017 Chrissy, Loy, Leander, Hannah, Ian

1 chrissy elmer c.elmer@uq.edu.au Tasmania 3 2 2015 Cath, Trace, Maia, Margie

1 chrissy elmer c.elmer@uq.edu.au Tasmania 4 2 2016 Cath, Trace, Maia, Margie

2 cath bowler c.bowler@uq.edu.a WA 1 1 2016 Chrissy, Loy, Leander, Hannah, Ian

2 cath bowler c.bowler@uq.edu.a WA 2 1 2017 Chrissy, Loy, Leander, Hannah, Ian

2 cath bowler c.bowler@uq.edu.a WA 3 2 2015 Cath, Trace, Maia, Margie

2 cath bowler c.bowler@uq.edu.a WA 4 2 2016 Cath, Trace, Maia, Margie

3 Claire Wainwr claire.wainwright BEND1 1 1 2016 Chrissy, Loy, Leander, Hannah, Ian

3 Claire Wainwr claire.wainwright BEND1 2 1 2017 Chrissy, Loy, Leander, Hannah, Ian

3 Claire Wainwr claire.wainwright BEND1 3 2 2015 Cath, Trace, Maia, Margie

3 Claire Wainwr claire.wainwright BEND1 4 2 2016 Cath, Trace, Maia, Margie

4 Hao Ran; Step BROM1 1 1 2016 Chrissy, Loy, Leander, Hannah, Ian

4 Hao Ran; Step BROM1 2 1 2017 Chrissy, Loy, Leander, Hannah, Ian

sqlite> select \* from projects inner join field\_season;

project\_id researcher email site fs\_id project\_id year crew\_list

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1 chrissy elmer c.elmer@uq.edu.au Tasmania 1 1 2016 Chrissy, Loy, Leander, Hannah, Ian

1 chrissy elmer c.elmer@uq.edu.au Tasmania 2 1 2017 Chrissy, Loy, Leander, Hannah, Ian

1 chrissy elmer c.elmer@uq.edu.au Tasmania 3 2 2015 Cath, Trace, Maia, Margie

1 chrissy elmer c.elmer@uq.edu.au Tasmania 4 2 2016 Cath, Trace, Maia, Margie

2 cath bowler c.bowler@uq.edu.a WA 1 1 2016 Chrissy, Loy, Leander, Hannah, Ian

2 cath bowler c.bowler@uq.edu.a WA 2 1 2017 Chrissy, Loy, Leander, Hannah, Ian

2 cath bowler c.bowler@uq.edu.a WA 3 2 2015 Cath, Trace, Maia, Margie

2 cath bowler c.bowler@uq.edu.a WA 4 2 2016 Cath, Trace, Maia, Margie

3 Claire Wainwr claire.wainwright BEND1 1 1 2016 Chrissy, Loy, Leander, Hannah, Ian

3 Claire Wainwr claire.wainwright BEND1 2 1 2017 Chrissy, Loy, Leander, Hannah, Ian

3 Claire Wainwr claire.wainwright BEND1 3 2 2015 Cath, Trace, Maia, Margie

3 Claire Wainwr claire.wainwright BEND1 4 2 2016 Cath, Trace, Maia, Margie

4 Hao Ran; Step BROM1 1 1 2016 Chrissy, Loy, Leander, Hannah, Ian

4 Hao Ran; Step BROM1 2 1 2017 Chrissy, Loy, Leander, Hannah, Ian

4 Hao Ran; Step BROM1 3 2 2015 Cath, Trace, Maia, Margie

4 Hao Ran; Step BROM1 4 2 2016 Cath, Trace, Maia, Margie

5 Claire Wainwr claire.wainwright DENS1 1 1 2016 Chrissy, Loy, Leander, Hannah, Ian

5 Claire Wainwr claire.wainwright DENS1 2 1 2017 Chrissy, Loy, Leander, Hannah, Ian

5 Claire Wainwr claire.wainwright DENS1 3 2 2015 Cath, Trace, Maia, Margie

5 Claire Wainwr claire.wainwright DENS1 4 2 2016 Cath, Trace, Maia, Margie

sqlite> select \* from projects join field\_season;

project\_id researcher email site fs\_id project\_id year crew\_list

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1 chrissy elmer c.elmer@uq.edu.au Tasmania 1 1 2016 Chrissy, Loy, Leander, Hannah, Ian

1 chrissy elmer c.elmer@uq.edu.au Tasmania 2 1 2017 Chrissy, Loy, Leander, Hannah, Ian

1 chrissy elmer c.elmer@uq.edu.au Tasmania 3 2 2015 Cath, Trace, Maia, Margie

1 chrissy elmer c.elmer@uq.edu.au Tasmania 4 2 2016 Cath, Trace, Maia, Margie

2 cath bowler c.bowler@uq.edu.a WA 1 1 2016 Chrissy, Loy, Leander, Hannah, Ian

2 cath bowler c.bowler@uq.edu.a WA 2 1 2017 Chrissy, Loy, Leander, Hannah, Ian

2 cath bowler c.bowler@uq.edu.a WA 3 2 2015 Cath, Trace, Maia, Margie

2 cath bowler c.bowler@uq.edu.a WA 4 2 2016 Cath, Trace, Maia, Margie

3 Claire Wainwr claire.wainwright BEND1 1 1 2016 Chrissy, Loy, Leander, Hannah, Ian

3 Claire Wainwr claire.wainwright BEND1 2 1 2017 Chrissy, Loy, Leander, Hannah, Ian

3 Claire Wainwr claire.wainwright BEND1 3 2 2015 Cath, Trace, Maia, Margie

3 Claire Wainwr claire.wainwright BEND1 4 2 2016 Cath, Trace, Maia, Margie

4 Hao Ran; Step BROM1 1 1 2016 Chrissy, Loy, Leander, Hannah, Ian

4 Hao Ran; Step BROM1 2 1 2017 Chrissy, Loy, Leander, Hannah, Ian

4 Hao Ran; Step BROM1 3 2 2015 Cath, Trace, Maia, Margie

4 Hao Ran; Step BROM1 4 2 2016 Cath, Trace, Maia, Margie

5 Claire Wainwr claire.wainwright DENS1 1 1 2016 Chrissy, Loy, Leander, Hannah, Ian

5 Claire Wainwr claire.wainwright DENS1 2 1 2017 Chrissy, Loy, Leander, Hannah, Ian

5 Claire Wainwr claire.wainwright DENS1 3 2 2015 Cath, Trace, Maia, Margie

5 Claire Wainwr claire.wainwright DENS1 4 2 2016 Cath, Trace, Maia, Margie

sqlite> select \* from projects join field\_season on projects.project\_id = field\_season.project\_id;

project\_id researcher email site fs\_id project\_id year crew\_list

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1 chrissy elmer c.elmer@uq.edu.au Tasmania 1 1 2016 Chrissy, Loy, Leander, Hannah, Ian

1 chrissy elmer c.elmer@uq.edu.au Tasmania 2 1 2017 Chrissy, Loy, Leander, Hannah, Ian

2 cath bowler c.bowler@uq.edu.a WA 3 2 2015 Cath, Trace, Maia, Margie

2 cath bowler c.bowler@uq.edu.a WA 4 2 2016 Cath, Trace, Maia, Margie

sqlite> select \* from projects;

project\_id researcher email site

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1 chrissy elmer c.elmer@uq.edu.au Tasmania

2 cath bowler c.bowler@uq.edu.a WA

3 Claire Wainwr claire.wainwright BEND1

4 Hao Ran; Step BROM1

5 Claire Wainwr claire.wainwright DENS1

sqlite> select \* from field\_season;

fs\_id project\_id year crew\_list

---------- ---------- ---------- ----------------------------------

1 1 2016 Chrissy, Loy, Leander, Hannah, Ian

2 1 2017 Chrissy, Loy, Leander, Hannah, Ian

3 2 2015 Cath, Trace, Maia, Margie

4 2 2016 Cath, Trace, Maia, Margie

sqlite> INSERT INTO field\_season VALUES (5, 3, 2013, 'Claire, Loy'), (6, 4, 'Steph, Hao Ran'), (7, 5, 'Claire, Tom');

Error: all VALUES must have the same number of terms

sqlite> INSERT INTO field\_season VALUES (5, 3, 2013, 'Claire, Loy'), (6, 4, 2015, 'Steph, Hao Ran'), (7, 5, 2014,'Claire, Tom');

sqlite> select \* from projects join field\_season on projects.project\_id = field\_season.project\_id;

project\_id researcher email site fs\_id project\_id year crew\_list

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1 chrissy elmer c.elmer@uq.edu.au Tasmania 1 1 2016 Chrissy, Loy, Leander, Hannah, Ian

1 chrissy elmer c.elmer@uq.edu.au Tasmania 2 1 2017 Chrissy, Loy, Leander, Hannah, Ian

2 cath bowler c.bowler@uq.edu.a WA 3 2 2015 Cath, Trace, Maia, Margie

2 cath bowler c.bowler@uq.edu.a WA 4 2 2016 Cath, Trace, Maia, Margie

3 Claire Wainwr claire.wainwright BEND1 5 3 2013 Claire, Loy

4 Hao Ran; Step BROM1 6 4 2015 Steph, Hao Ran

5 Claire Wainwr claire.wainwright DENS1 7 5 2014 Claire, Tom

sqlite> select \* from projects join field\_season on projects.project\_id = field\_season.project\_id join trait\_summary on trait\_summary.fs\_id = field\_season.fs\_id;

project\_id researcher email site fs\_id project\_id year crew\_list trait\_id fs\_id traits

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1 chrissy elmer c.elmer@uq.edu.au Tasmania 1 1 2016 Chrissy, Loy, Leander, Hannah, Ian 1 1 SLA, leaf area, RTD

1 chrissy elmer c.elmer@uq.edu.au Tasmania 2 1 2017 Chrissy, Loy, Leander, Hannah, Ian 2 2 biomass, leaf area,

2 cath bowler c.bowler@uq.edu.a WA 3 2 2015 Cath, Trace, Maia, Margie 3 3 L:S, leaf area, RTD

2 cath bowler c.bowler@uq.edu.a WA 4 2 2016 Cath, Trace, Maia, Margie 4 4 SLA, height, RTD

sqlite> select project\_id, researcher, email, site, fs\_id, year, crew\_list, traits from projects join field\_season on projects.project\_id = field\_season.project\_id join trait\_summary on trait\_summary.fs\_id = field\_season.fs\_id;

Error: ambiguous column name: project\_id

sqlite> select projects.project\_id, researcher, email, site, fs\_id, year, crew\_list, traits from projects join field\_season on projects.project\_id = field\_season.project\_id join trait\_summary on trait\_summary.fs\_id = field\_season.fs\_id;

Error: ambiguous column name: fs\_id

sqlite> select projects.project\_id, researcher, email, site, field\_season.fs\_id, year, crew\_list, traits from projects join field\_season on projects.project\_id = field\_season.project\_id join trait\_summary on trait\_summary.fs\_id = field\_season.fs\_id;

project\_id researcher email site fs\_id year crew\_list traits

---------- ------------- ----------------- ---------- ---------- ---------- ---------------------------------- -------------------

1 chrissy elmer c.elmer@uq.edu.au Tasmania 1 2016 Chrissy, Loy, Leander, Hannah, Ian SLA, leaf area, RTD

1 chrissy elmer c.elmer@uq.edu.au Tasmania 2 2017 Chrissy, Loy, Leander, Hannah, Ian biomass, leaf area,

2 cath bowler c.bowler@uq.edu.a WA 3 2015 Cath, Trace, Maia, Margie L:S, leaf area, RTD

2 cath bowler c.bowler@uq.edu.a WA 4 2016 Cath, Trace, Maia, Margie SLA, height, RTD

sqlite> select \* from trait\_summary;

trait\_id fs\_id traits

---------- ---------- -------------------

1 1 SLA, leaf area, RTD

2 2 biomass, leaf area,

3 3 L:S, leaf area, RTD

4 4 SLA, height, RTD

sqlite> INSERT INTO traits VALUES (5, 5, 'height, leaf area, RTD'),

...> (6, 6, 'flower number, leaf area, RTD'),

...> (7, 7, 'L:S, leaf area, RTD, flower size'),

...> (8, 8, 'height, biomass, RTD');

Error: no such table: traits

sqlite> INSERT INTO trait\_summary VALUES (5, 5, 'height, leaf area, RTD'),

...> (6, 6, 'flower number, leaf area, RTD'),

...> (7, 7, 'L:S, leaf area, RTD, flower size'),

...> (8, 8, 'height, biomass, RTD');

sqlite> select projects.project\_id, researcher, email, site, field\_season.fs\_id, year, crew\_list, traits from projects

...> join field\_season on projects.project\_id = field\_season.project\_id

...> join trait\_summary on trait\_summary.fs\_id = field\_season.fs\_id;

project\_id researcher email site fs\_id year crew\_list traits

---------- ------------- ----------------- ---------- ---------- ---------- ---------------------------------- -------------------

1 chrissy elmer c.elmer@uq.edu.au Tasmania 1 2016 Chrissy, Loy, Leander, Hannah, Ian SLA, leaf area, RTD

1 chrissy elmer c.elmer@uq.edu.au Tasmania 2 2017 Chrissy, Loy, Leander, Hannah, Ian biomass, leaf area,

2 cath bowler c.bowler@uq.edu.a WA 3 2015 Cath, Trace, Maia, Margie L:S, leaf area, RTD

2 cath bowler c.bowler@uq.edu.a WA 4 2016 Cath, Trace, Maia, Margie SLA, height, RTD

3 Claire Wainwr claire.wainwright BEND1 5 2013 Claire, Loy height, leaf area,

4 Hao Ran; Step BROM1 6 2015 Steph, Hao Ran flower number, leaf

5 Claire Wainwr claire.wainwright DENS1 7 2014 Claire, Tom L:S, leaf area, RTD

sqlite> select projects.project\_id, researcher, email, site, trait\_summary.fs\_id, year, crew\_list, traits from projects

...> join field\_season on projects.project\_id = field\_season.project\_id

...> join trait\_summary on trait\_summary.fs\_id = field\_season.fs\_id;

project\_id researcher email site fs\_id year crew\_list traits

---------- ------------- ----------------- ---------- ---------- ---------- ---------------------------------- -------------------

1 chrissy elmer c.elmer@uq.edu.au Tasmania 1 2016 Chrissy, Loy, Leander, Hannah, Ian SLA, leaf area, RTD

1 chrissy elmer c.elmer@uq.edu.au Tasmania 2 2017 Chrissy, Loy, Leander, Hannah, Ian biomass, leaf area,

2 cath bowler c.bowler@uq.edu.a WA 3 2015 Cath, Trace, Maia, Margie L:S, leaf area, RTD

2 cath bowler c.bowler@uq.edu.a WA 4 2016 Cath, Trace, Maia, Margie SLA, height, RTD

3 Claire Wainwr claire.wainwright BEND1 5 2013 Claire, Loy height, leaf area,

4 Hao Ran; Step BROM1 6 2015 Steph, Hao Ran flower number, leaf

5 Claire Wainwr claire.wainwright DENS1 7 2014 Claire, Tom L:S, leaf area, RTD

sqlite> .tableds

Error: unknown command or invalid arguments: "tableds". Enter ".help" for help

sqlite> .tables

field\_season projects trait\_summary

plot site treatment

sqlite> select projects.project\_id, researcher, email, site, trait\_summary.fs\_id, year, crew\_list, traits from projects

...> join field\_season on projects.project\_id = field\_season.project\_id

...> join trait\_summary on trait\_summary.fs\_id = field\_season.fs\_id

...> WHERE site = Tasmania;

Error: no such column: Tasmania

sqlite> select projects.project\_id, researcher, email, site, trait\_summary.fs\_id, year, crew\_list, traits from projects

...> join field\_season on projects.project\_id = field\_season.project\_id

...> join trait\_summary on trait\_summary.fs\_id = field\_season.fs\_id

...> WHERE site in (select site from projects where site = Tasmania);

Error: no such column: Tasmania

sqlite> select projects.project\_id, researcher, email, site, trait\_summary.fs\_id, year, crew\_list, traits from projects

...> join field\_season on projects.project\_id = field\_season.project\_id

...> join trait\_summary on trait\_summary.fs\_id = field\_season.fs\_id

...> WHERE site in (select site from projects where site = 'Tasmania');

project\_id researcher email site fs\_id year crew\_list traits

---------- ------------- ----------------- ---------- ---------- ---------- ---------------------------------- -------------------

1 chrissy elmer c.elmer@uq.edu.au Tasmania 1 2016 Chrissy, Loy, Leander, Hannah, Ian SLA, leaf area, RTD

1 chrissy elmer c.elmer@uq.edu.au Tasmania 2 2017 Chrissy, Loy, Leander, Hannah, Ian biomass, leaf area,

sqlite> select projects.project\_id, researcher, email, site, trait\_summary.fs\_id, year, crew\_list, traits from projects

...> join field\_season on projects.project\_id = field\_season.project\_id

...> join trait\_summary on trait\_summary.fs\_id = field\_season.fs\_id

...> WHERE site = 'Tasmania');

Error: near ")": syntax error

sqlite> select projects.project\_id, researcher, email, site, trait\_summary.fs\_id, year, crew\_list, traits from projects

...> join field\_season on projects.project\_id = field\_season.project\_id

...> join trait\_summary on trait\_summary.fs\_id = field\_season.fs\_id

...> WHERE site = 'Tasmania';

project\_id researcher email site fs\_id year crew\_list traits

---------- ------------- ----------------- ---------- ---------- ---------- ---------------------------------- -------------------

1 chrissy elmer c.elmer@uq.edu.au Tasmania 1 2016 Chrissy, Loy, Leander, Hannah, Ian SLA, leaf area, RTD

1 chrissy elmer c.elmer@uq.edu.au Tasmania 2 2017 Chrissy, Loy, Leander, Hannah, Ian biomass, leaf area,

sqlite> select \* from plot

...> ;

plot\_id fs\_id site block plot treatment

---------- ---------- ---------- ---------- ---------- ----------

1 1 1 1 1 1

2 1 1 1 2 2

3 1 1 2 1 1

4 1 1 2 2 2

5 1 2 1 2 2

6 2 2 1 2 2

7 1 2 1 1 1

sqlite> .tables

field\_season projects trait\_summary

plot site treatment

sqlite> select \* from site;

id site area\_km2 longitude latitude max\_temp min\_temp ann\_precip\_mm

---------- ---------- ---------- ---------- ---------- ---------- ---------- -------------

1 bendering 300 152 27 2 1 100

2 Kunjin

sqlite> INSERT INTO site VALUES (2, 'perenjori', 300, 152.00000, 27.00000, 2, 1, 100);

Error: UNIQUE constraint failed: site.id

sqlite> DELETE from site where id = 2;

sqlite> select \* from site;

id site area\_km2 longitude latitude max\_temp min\_temp ann\_precip\_mm

---------- ---------- ---------- ---------- ---------- ---------- ---------- -------------

1 bendering 300 152 27 2 1 100

sqlite> INSERT INTO site VALUES (2, 'perenjori', 300, 152.00000, 28.00000, 33, -2, 100);

sqlite> select \* from site;

id site area\_km2 longitude latitude max\_temp min\_temp ann\_precip\_mm

---------- ---------- ---------- ---------- ---------- ---------- ---------- -------------

1 bendering 300 152 27 2 1 100

2 perenjori 300 152 28 33 -2 100

sqlite> INSERT INTO site VALUES (3, 'Kunjin', 250, 152.00000, 32.00000, 40, -2, 100),

...> (4, 'Bongada', 500, 152.00000, 32.00000, 29, -5, 100);

sqlite> select \* from site;

id site area\_km2 longitude latitude max\_temp min\_temp ann\_precip\_mm

---------- ---------- ---------- ---------- ---------- ---------- ---------- -------------

1 bendering 300 152 27 2 1 100

2 perenjori 300 152 28 33 -2 100

3 Kunjin 250 152 32 40 -2 100

4 Bongada 500 152 32 29 -5 100

sqlite> INSERT INTO plot VALUES (8, 1, 3, 1, 2, 2), (9, 2, 3, 1, 2, 2), (10, 1, 4, 1, 1, 1);

sqlite> .tables

field\_season projects trait\_summary

plot site treatment

sqlite> select \* from treatment;

id treatment

---------- ----------

1 control

2 water

3 shade

4 density\_30

5 density\_60

sqlite> select plot\_id, fs\_id, plot.site, block, plot.treatment from plot\_id

...> join site on plot.site = site.id;

Error: no such table: plot\_id

sqlite> select plot\_id, fs\_id, plot.site, block, plot.treatment from plot

...> join site on plot.site = site.id

...> join treatment on plot.treatment = treatment.id;

plot\_id fs\_id site block treatment

---------- ---------- ---------- ---------- ----------

1 1 1 1 1

2 1 1 1 2

3 1 1 2 1

4 1 1 2 2

5 1 2 1 2

6 2 2 1 2

7 1 2 1 1

8 1 3 1 2

9 2 3 1 2

10 1 4 1 1

sqlite> select plot\_id, fs\_id, site.site, block, plot.treatment from plot

...> join site on plot.site = site.id

...> join treatment on plot.treatment = treatment.id;

plot\_id fs\_id site block treatment

---------- ---------- ---------- ---------- ----------

1 1 bendering 1 1

2 1 bendering 1 2

3 1 bendering 2 1

4 1 bendering 2 2

5 1 perenjori 1 2

6 2 perenjori 1 2

7 1 perenjori 1 1

8 1 Kunjin 1 2

9 2 Kunjin 1 2

10 1 Bongada 1 1

sqlite> select plot\_id, fs\_id, site.site, block, treatment.treatment from plot

...> join site on plot.site = site.id

...> join treatment on plot.treatment = treatment.id;

plot\_id fs\_id site block treatment

---------- ---------- ---------- ---------- ----------

1 1 bendering 1 control

2 1 bendering 1 water

3 1 bendering 2 control

4 1 bendering 2 water

5 1 perenjori 1 water

6 2 perenjori 1 water

7 1 perenjori 1 control

8 1 Kunjin 1 water

9 2 Kunjin 1 water

10 1 Bongada 1 control

sqlite> select plot\_id, fs\_id, plot.site, site.id, site.site, block, treatment.treatment from plot

...> join site on plot.site = site.id

...> join treatment on plot.treatment = treatment.id;

plot\_id fs\_id site id site block treatment

---------- ---------- ---------- ---------- ---------- ---------- ----------

1 1 1 1 bendering 1 control

2 1 1 1 bendering 1 water

3 1 1 1 bendering 2 control

4 1 1 1 bendering 2 water

5 1 2 2 perenjori 1 water

6 2 2 2 perenjori 1 water

7 1 2 2 perenjori 1 control

8 1 3 3 Kunjin 1 water

9 2 3 3 Kunjin 1 water

10 1 4 4 Bongada 1 control

sqlite> .tables

field\_season projects trait\_summary

plot site treatment

sqlite> CREATE TABLE family (

...> test\_trait.db family\_id integer NOT NULL PRIMARY KEY,

...> test\_trait.db family text NOT NULL);

Error: near ".": syntax error

sqlite>

sqlite> INSERT INTO family VALUES (1, asteraceae), (2, goodeniaceae);

Error: no such table: family

sqlite> CREATE TABLE family (

...> test\_trait.db family\_id integer NOT NULL PRIMARY KEY,

...> test\_trait.db family text NOT NULL);

Error: near ".": syntax error

sqlite> CREATE TABLE family (

...> family\_id integer NOT NULL PRIMARY KEY,

...> family text NOT NULL);

sqlite> INSERT INTO family VALUES (1, asteraceae), (2, goodeniaceae);

Error: no such column: goodeniaceae

sqlite>

sqlite> INSERT INTO family VALUES (1, "asteraceae"), (2, "goodeniaceae");

sqlite>

sqlite>

sqlite> CREATE TABLE genus (

...> genus\_id integer NOT NULL PRIMARY KEY,

...> family text NOT NULL);

sqlite>

sqlite> INSERT INTO family VALUES (1, "arctotheca"), (2, "velleia");

Error: UNIQUE constraint failed: family.family\_id

sqlite>

sqlite>

sqlite> CREATE TABLE invasive (

...> invasive\_id integer NOT NULL PRIMARY KEY,

...> invasive NOT NULL);

sqlite>

sqlite> INSERT INTO invasive VALUES (1, "native"), (2, "exotic");

sqlite>

sqlite>

sqlite> CREATE TABLE habit (

...> habit\_id integer NOT NULL PRIMARY KEY,

...> habit text NOT NULL);

sqlite>

sqlite> INSERT INTO habit VALUES (1, "graminoid"), (2, "forb");

sqlite>

sqlite>

sqlite> CREATE TABLE life\_form (

...> life\_form\_id integer NOT NULL PRIMARY KEY,

...> life\_form text NOT NULL);

sqlite>

sqlite> INSERT INTO life\_form VALUES (1, "annual"), (2, 'biannual'), (3, 'perennial');

sqlite>

sqlite> CREATE TABLE species (

...> species\_id integer PRIMARY KEY,

...> family text NOT NULL REFERENCES family(family\_id),

...> genus text NOT NULL,

...> species text NOT NULL,

...> invasive integer REFERENCES invasive(invasive\_id),

...> habit integer REFERENCES habit(habit\_id),

...> life\_form integer REFERENCES life\_form(life\_form\_id));

sqlite>

sqlite> INSERT INTO species VALUES (1, 1, 1, 'calendula', 2, 2, 1),(1, 2, 2, 'rosea', 1, 2, 1);

Error: UNIQUE constraint failed: species.species\_id

sqlite> INSERT INTO species VALUES (1, 1, 1, 'calendula', 2, 2, 1),(2, 2, 2, 'rosea', 1, 2, 1);

sqlite> select \* from species;

species\_id family genus species invasive habit life\_form

---------- ---------- ---------- ---------- ---------- ---------- ----------

1 1 1 calendula 2 2 1

2 2 2 rosea 1 2 1

sqlite> select family.family, genus.genus, species, invasive.invasive, habit.habit, life\_form.life\_form from species

...> join family on species.family = family.family\_id

...> join genus on species.genus = genus.genus\_id

...> join invasive on species.invasive = invasive.invasive\_id

...> join habit on species.habit = habit.habit\_id

...> join life\_form on species.life\_form = life\_form.life\_form\_id;

Error: no such column: genus.genus

sqlite> select \* from genus;

sqlite> INSERT INTO genus VALUES (1, "arctotheca"), (2, "velleia");

sqlite> select \* from genus;

genus\_id family

---------- ----------

1 arctotheca

2 velleia

sqlite> select family.family, genus.genus, species, invasive.invasive, habit.habit, life\_form.life\_form from species

...> join family on species.family = family.family\_id

...> join genus on species.genus = genus.genus\_id

...> join invasive on species.invasive = invasive.invasive\_id

...> join habit on species.habit = habit.habit\_id

...> join life\_form on species.life\_form = life\_form.life\_form\_id;

Error: no such column: genus.genus

sqlite> drop genus;

Error: near "genus": syntax error

sqlite> drop table genus;

sqlite> CREATE TABLE genus (

...> genus\_id integer NOT NULL PRIMARY KEY,

...> genus text NOT NULL);

sqlite>

sqlite> INSERT INTO genus VALUES (1, "arctotheca"), (2, "velleia");

sqlite> select family.family, genus.genus, species, invasive.invasive, habit.habit, life\_form.life\_form from species

...> join family on species.family = family.family\_id

...> join genus on species.genus = genus.genus\_id

...> join invasive on species.invasive = invasive.invasive\_id

...> join habit on species.habit = habit.habit\_id

...> join life\_form on species.life\_form = life\_form.life\_form\_id;

family genus species invasive habit life\_form

---------- ---------- ---------- ---------- ---------- ----------

asteraceae arctotheca calendula exotic forb annual

goodeniace velleia rosea native forb annual

sqlite>

[Restored 21 Jun 2017, 9:55:28 AM]

Last login: Wed Jun 21 09:12:45 on console

Restored session: Tue 13 Jun 2017 16:20:32 AEST

margiemayfield@d-i184-17-111:~/Google Drive/FunctionalTraitDatabase/test\_trait\_database$

[Restored 12 Jul 2017, 11:31:25 AM]

Last login: Wed Jul 12 09:05:31 on console

Restored session: Wed 21 Jun 2017 13:48:53 AEST

margiemayfield@biol-3hugg7l:~/Google Drive/FunctionalTraitDatabase/test\_trait\_database$ /Users/margiemayfield/Dropbox/Mayfield\ Lab/FunctionalTraitDatabase/Projects/BROM1/RAW/2014\_bromus\_plots.csv

[Restored 27 Jul 2017, 9:18:59 AM]

Last login: Thu Jul 27 08:41:41 on console

Restored session: Wed 12 Jul 2017 14:40:01 AEST

margiemayfield@biol-3hugg7l:~/Google Drive/FunctionalTraitDatabase/test\_trait\_database$ /Users/margiemayfield/Google\ Drive/Cath\ Honours\ 2017/Graphing/AICgraphs.Trace.R

[Restored 31 Jul 2017, 10:25:57 AM]

Last login: Mon Jul 31 08:39:58 on console

Restored session: Thu 27 Jul 2017 15:47:33 AEST

margiemayfield@biol-3hugg7l:~/Google Drive/FunctionalTraitDatabase/test\_trait\_database$ sqlite3 test\_trait.db

SQLite version 3.8.10.2 2015-05-20 18:17:19

Enter ".help" for usage hints.

sqlite> .tables

family habit plot species

field\_season invasive projects trait\_summary

genus life\_form site treatment

sqlite> select family.family, genus.genus, species, invasive.invasive, habit.habit, life\_form.life\_form from species;

Error: no such column: family.family

sqlite> select family.family, genus.genus, species, invasive.invasive, habit.habit, life\_form.life\_form from species

...> join family on species.family = family.family\_id

...> join genus on species.genus = genus.genus\_id

...> join invasive on species.invasive = invasive.invasive\_id

...> join habit on species.habit = habit.habit\_id

...> join life\_form on species.life\_form = life\_form.life\_form\_id;

asteraceae|arctotheca|calendula|exotic|forb|annual

goodeniaceae|velleia|rosea|native|forb|annual

sqlite> .columns on

Error: unknown command or invalid arguments: "columns". Enter ".help" for help

sqlite> .mode columns

sqlite> .header on

sqlite> select family.family, genus.genus, species, invasive.invasive, habit.habit, life\_form.life\_form from species

...> join family on species.family = family.family\_id

...> join genus on species.genus = genus.genus\_id

...> join invasive on species.invasive = invasive.invasive\_id

...> join habit on species.habit = habit.habit\_id

...> join life\_form on species.life\_form = life\_form.life\_form\_id;

family genus species invasive habit life\_form

---------- ---------- ---------- ---------- ---------- ----------

asteraceae arctotheca calendula exotic forb annual

goodeniace velleia rosea native forb annual

sqlite> .tables

family habit plot species

field\_season invasive projects trait\_summary

genus life\_form site treatment

sqlite> select \* from family;

family\_id family

---------- ----------

1 asteraceae

2 goodeniace

sqlite> select \* from habit;

habit\_id habit

---------- ----------

1 graminoid

2 forb

sqlite> DROP TABLE species, family, genus, invasive, habit, life form;

Error: near ",": syntax error

sqlite> DROP TABLE species;

sqlite> DROP TABLE family;

sqlite> DROP TABLE genus;

sqlite> DROP TABLE invasive;

sqlite>

sqlite> DROP TABLE habit;

sqlite> DROP TABLE life\_form;

sqlite> .tables

field\_season projects trait\_summary

plot site treatment

sqlite> .mode csv

sqlite> .import species.csv species

sqlite> .tables

field\_season projects species treatment

plot site trait\_summary

sqlite> select \* from species;

"",species\_id,family,genus,species,invasive,habit,life\_form

1,1,22,9,uliginosum,1,1,1

2,2,22,77,cupaniana,2,1,1

3,3,4,53,tomentosus,1,1,1

4,4,4,1,calendula,2,1,1

5,5,4,10,contorta,1,2,1

6,6,4,67,curvipes,1,1,1

7,7,4,67,dyeri,1,1,1

8,8,4,41,sp,1,1,1

9,9,4,2,elegantissima,1,2,2

10,10,4,2,sp,1,2,1

11,11,4,2,sp3,1,1,1

12,12,4,2,macalpinei,1,2,2

13,13,23,25,barbata,2,1,1

14,14,19,108,graminea,1,2,2

15,15,9,18,drummondii,1,1,1

16,16,9,23,sphaerocephala,1,1,2

17,17,9,30,iberidifolia,1,1,1

18,18,9,30,perpusilla,1,1,1

19,19,18,30,ciliaris,1,1,1

20,20,18,26,tournefortii,2,1,1

21,21,18,78,maxima,2,1,2

22,22,18,3,rubens,2,2,1

23,23,18,3,sp,2,2,1

24,24,18,3,diandrus,2,2,2

25,25,18,118,australis,1,1,1

26,26,26,27,semibarbata,1,1,1

27,27,10,43,congesta,1,1,1

28,28,12,24,micrantha,1,2,1

29,29,12,107,sp,1,2,2

30,30,12,107,denticulata,1,5,2

31,31,12,107,roei,1,2,2

32,32,12,11,corrigioloides,1,1,1

33,33,12,11,granulifera,1,1,1

34,34,31,11,eremaea,1,1,1

35,35,31,125,multiflorus,1,6,2

36,36,31,36,hispidula,1,1,1

37,37,14,36,multicaulis,1,1,1

38,38,14,72,annua,2,1,1

39,39,14,94,drummondiana,1,1,1

40,40,34,94,sp,1,1,1

41,41,38,94,sp2,1,1,1

42,42,38,94,aristata,1,1,1

43,43,38,34,drummondii,1,1,1

44,44,38,64,obionoides,1,2,1

45,45,16,117,versicolor,1,2,2

46,46,16,44,austrotenuifolia,1,1,1

47,47,16,106,pseudevax,1,3,2

48,48,16,119,bipinnata,2,1,1

49,49,1,4,colorata,1,1,1

50,50,1,4,closiana,1,1,1

51,51,1,123,amplexans,1,6,2

52,52,1,123,gemmata,1,5,2

53,53,1,100,lavandulacea,1,1,1

54,54,1,59,glochidiatus,1,1,1

55,55,1,116,revoluta,1,1,1

56,56,1,47,capillipes,1,1,1

57,57,1,98,erythrorhiza,1,5,2

58,58,1,98,glanduligera,1,2,2

59,59,1,98,macrantha,1,3,2

60,60,1,69,plantagineum,2,1,1

61,61,1,31,longiflora,2,1,1

62,62,1,113,australis,2,2,2

63,63,1,5,tomentosa,1,3,2

64,64,1,12,aureum,2,1,1

65,65,1,12,botrys,2,1,1

66,66,1,12,cicutarium,2,3,2

67,67,1,12,cygnorum,1,1,1

68,68,1,71,ramosum,1,1,1

69,69,1,81,drummondii,1,1,1

70,70,1,62,tenuifolia,1,1,1

71,71,1,109,osbornei,1,1,1

72,72,1,45,tenuissima,1,1,1

73,73,1,74,nodulosus,1,2,1

74,74,1,42,berardiana,1,1,1

75,75,1,42,occidentalis,1,1,1

76,76,1,42,pusilliflora,1,1,1

77,77,1,42,krauseana,1,1,1

78,78,1,114,paniculata,1,3,2

79,79,1,61,odontocarpa,1,1,1

80,80,1,79,rhagadioloides,2,1,1

81,81,1,120,glomerosa,1,2,2

82,82,1,54,leporinum,2,1,1

83,83,1,13,glutinosum.subsp.glutinosum,1,1,1

84,84,1,13,demissum,1,1,1

85,85,1,13,glutinosum.subsp.venustum,1,1,1

86,86,1,38,pilifera,1,1,1

87,87,1,6,glabra,2,1,1

88,88,1,73,graminifolia,1,1,1

89,89,1,121,juncea,1,1,1

90,90,1,19,bufonius,2,2,1

91,91,1,60,aurea,2,1,1

92,92,1,48,rosea,1,2,1

93,93,1,48,davenportii,1,1,1

94,94,1,124,bonariense,2,5,2

95,95,1,99,dubia,1,1,1

96,96,1,99,leptantha,1,1,1

97,97,1,85,gibbosa,1,1,1

98,98,1,7,perenne,2,2,1

99,99,1,104,effusa,1,1,1

100,100,1,95,arvensis,2,2,1

101,101,1,39,minima,2,1,1

102,102,1,39,polymorpha,2,2,1

103,103,3,110,sphaerocarpa,1,2,2

104,104,3,56,crystallinum,2,1,1

105,105,33,56,nodiflorum,2,2,2

106,106,49,32,myosotidifolia,1,1,1

107,107,42,32,tenuifolia,1,1,1

108,108,42,66,paradoxus,1,1,1

109,109,42,28,monstrosus,2,1,1

110,110,30,83,flaccida,2,3,2

111,111,6,83,setifolia,2,2,1

112,112,6,112,guerinae,1,1,1

113,113,6,87,alopecuroidea,1,1,1

114,114,6,93,rotundifolia,1,1,1

115,115,8,105,lusitanicum,1,1,1

116,116,8,96,perennans,1,3,2

117,117,8,80,latifolia,2,1,1

118,118,8,102,cardiostegia,1,1,1

119,119,8,8,airoides,2,2,1

120,120,8,37,dubia,2,1,1

121,121,8,122,deformis,1,5,2

122,122,8,76,sulcatum,1,1,1

123,123,24,97,imbricata,1,2,1

124,124,24,35,coronopus,2,3,2

125,125,32,35,debilis,1,1,1

126,126,32,14,capillaris,1,4,1

127,127,32,14,lessonii,1,1,1

128,128,7,14,canescens,1,1,1

129,129,20,49,angustifolia,1,1,2

130,130,15,49,gnaphalioides,1,1,1

131,131,15,33,muelleriana,1,1,1

132,132,15,126,tetraphyllum,2,5,2

133,133,15,92,microphylla,1,2,1

134,134,15,90,gracile,1,1,1

135,135,15,17,polystachyus,1,1,1

136,136,28,17,gaudichaudii,1,1,1

137,137,27,17,exaltatus,1,1,1

138,138,46,17,drummondii,1,1,1

139,139,35,17,spathulatus,1,1,1

140,140,35,17,declinatus,1,1,1

141,141,35,17,holosericeus,1,1,1

142,142,35,17,sp,1,3,2

143,143,35,88,urvillei,1,2,1

144,144,35,101,rugosum,2,1,1

145,145,35,15,pygmaea,1,1,1

146,146,29,15,chlorocephala,1,1,1

147,147,40,15,citrina,1,1,2

148,148,36,15,spicata,1,1,1

149,149,13,15,humboldtiana,1,1,1

150,150,13,15,laevis,1,1,1

151,151,2,15,maryonii,1,2,1

152,152,2,15,polycephala,1,1,1

153,153,2,15,manglesii,1,1,1

154,154,2,50,linearis,1,1,1

155,155,2,115,rosea,2,1,2

156,156,2,58,pumila,2,1,1

157,157,2,84,caespitosum,1,2,2

158,158,2,103,spicatum,1,1,1

159,159,2,63,cassiniana,1,2,2

160,160,2,86,nanus,1,1,2

161,161,2,40,glossanthus,1,3,2

162,162,2,75,sp,1,1,1

163,163,2,57,nocturna,2,1,1

164,164,2,29,oleraceus,2,1,1

165,165,2,89,monogyna,1,1,1

166,166,2,65,lineare,1,1,1

167,167,2,91,manglesianus,1,1,1

168,168,2,91,rectantherus,1,1,1

169,169,2,22,pilosa,1,1,1

170,170,2,22,cyanopetala,1,1,1

171,171,2,22,ornata,1,1,1

172,172,2,55,subterraneum,2,1,1

173,173,47,55,hirtum,2,1,1

174,174,5,55,glomeratum,2,5,2

175,175,5,51,isingiana,1,1,1

176,176,5,70,picroides,2,1,1

177,177,39,46,anthemoides,2,4,2

178,178,48,21,rosea,1,2,2

179,179,17,21,cycnopotamica,1,1,1

180,180,45,20,bromoides,2,1,1

181,181,25,20,myuros,2,2,1

182,182,37,82,capensis,2,2,1

183,183,43,82,gracilenta,1,1,1

184,184,43,16,acuminata,1,1,1

185,185,41,16,nitida,1,2,1

186,186,44,111,drummondii,1,5,2

187,187,11,111,spPaynes.Find,1,7,2

188,188,11,111,densiflora,1,2,2

189,189,11,68,divaricata,2,1,1

190,190,21,52,iodocarpum,2,1,1

sqlite> .import family.csv family

sqlite>

sqlite> .import genus.csv. genus

Error: cannot open "genus.csv."

sqlite> .import genus.csv genus

sqlite> .import habit.csv habit

sqlite> .import invasive.csv invasive

sqlite> .import life\_form.csv life\_form

sqlite> select family.family, genus.genus, species, invasive.invasive, habit.habit, life\_form.life\_form from species

...> join family on species.family = family.family\_id

...> join genus on species.genus = genus.genus\_id

...> join invasive on species.invasive = invasive.invasive\_id

...> join habit on species.habit = habit.habit\_id

...> join life\_form on species.life\_form = life\_form.life\_form\_id;

family,genus,species,invasive,habit,life\_form

aizoaceae,actinobole,uliginosum,native,forb,annual

aizoaceae,aira,cupaniana,exotic,forb,annual

amaranthaceae,angianthus,tomentosus,native,forb,annual

amaranthaceae,arctotheca,calendula,exotic,forb,annual

amaranthaceae,aristida,contorta,native,graminoid,annual

amaranthaceae,arthropodium,curvipes,native,forb,annual

amaranthaceae,arthropodium,dyeri,native,forb,annual

amaranthaceae,atriplex,sp,native,forb,annual

amaranthaceae,austrostipa,elegantissima,native,graminoid,perennial

amaranthaceae,austrostipa,sp,native,graminoid,annual

amaranthaceae,austrostipa,sp3,native,forb,annual

amaranthaceae,austrostipa,macalpinei,native,graminoid,perennial

apiaceae,avena,barbata,exotic,forb,annual

apocynaceae,bellida,graminea,native,graminoid,perennial

araliaceae,blennospora,drummondii,native,forb,annual

araliaceae,borya,sphaerocephala,native,forb,perennial

araliaceae,brachyscome,iberidifolia,native,forb,annual

araliaceae,brachyscome,perpusilla,native,forb,annual

asparagaceae,brachyscome,ciliaris,native,forb,annual

asparagaceae,brassica,tournefortii,exotic,forb,annual

asparagaceae,briza,maxima,exotic,forb,perennial

asparagaceae,bromus,rubens,exotic,graminoid,annual

asparagaceae,bromus,sp,exotic,graminoid,annual

asparagaceae,bromus,diandrus,exotic,graminoid,perennial

asparagaceae,brunonia,australis,native,forb,annual

boraginaceae,bulbine,semibarbata,native,forb,annual

boryaceae,burchardia,congesta,native,forb,annual

brassicaceae,caesia,micrantha,native,graminoid,annual

brassicaceae,caladenia,sp,native,graminoid,perennial

brassicaceae,caladenia,denticulata,native,forb+tuberous,perennial

brassicaceae,caladenia,roei,native,graminoid,perennial

brassicaceae,calandrinia,corrigioloides,native,forb,annual

brassicaceae,calandrinia,granulifera,native,forb,annual

campanulaceae,calandrinia,eremaea,native,forb,annual

campanulaceae,calocephalus,multiflorus,native,forb+cormous,perennial

campanulaceae,calotis,hispidula,native,forb,annual

caryophyllaceae,calotis,multicaulis,native,forb,annual

caryophyllaceae,carrichtera,annua,exotic,forb,annual

caryophyllaceae,centrolepis,drummondiana,native,forb,annual

celastraceae,centrolepis,sp,native,forb,annual

centrolepidaceae,centrolepis,sp2,native,forb,annual

centrolepidaceae,centrolepis,aristata,native,forb,annual

centrolepidaceae,cephalipterum,drummondii,native,forb,annual

centrolepidaceae,ceratogyne,obionoides,native,graminoid,annual

colchicaceae,chamaescilla,versicolor,native,graminoid,perennial

colchicaceae,cheilanthes,austrotenuifolia,native,forb,annual

colchicaceae,chthonocephalus,pseudevax,native,shrub,perennial

colchicaceae,cotula,bipinnata,exotic,forb,annual

compositae,crassula,colorata,native,forb,annual

compositae,crassula,closiana,native,forb,annual

compositae,cyanicula,amplexans,native,forb+cormous,perennial

compositae,cyanicula,gemmata,native,forb+tuberous,perennial

compositae,dampiera,lavandulacea,native,forb,annual

compositae,daucus,glochidiatus,native,forb,annual

compositae,dianella,revoluta,native,forb,annual

compositae,dichopogon,capillipes,native,forb,annual

compositae,drosera,erythrorhiza,native,forb+tuberous,perennial

compositae,drosera,glanduligera,native,graminoid,perennial

compositae,drosera,macrantha,native,shrub,perennial

compositae,echium,plantagineum,exotic,forb,annual

compositae,ehrharta,longiflora,exotic,forb,annual

compositae,emex,australis,exotic,graminoid,perennial

compositae,enchylaena,tomentosa,native,shrub,perennial

compositae,erodium,aureum,exotic,forb,annual

compositae,erodium,botrys,exotic,forb,annual

compositae,erodium,cicutarium,exotic,shrub,perennial

compositae,erodium,cygnorum,native,forb,annual

compositae,erymophyllum,ramosum,native,forb,annual

compositae,euphorbia,drummondii,native,forb,annual

compositae,gilberta,tenuifolia,native,forb,annual

compositae,gilruthia,osbornei,native,forb,annual

compositae,gnephosis,tenuissima,native,forb,annual

compositae,gonocarpus,nodulosus,native,graminoid,annual

compositae,goodenia,berardiana,native,forb,annual

compositae,goodenia,occidentalis,native,forb,annual

compositae,goodenia,pusilliflora,native,forb,annual

compositae,goodenia,krauseana,native,forb,annual

compositae,grevillea,paniculata,native,shrub,perennial

compositae,haloragis,odontocarpa,native,forb,annual

compositae,hedypnois,rhagadioloides,exotic,forb,annual

compositae,hibbertia,glomerosa,native,graminoid,perennial

compositae,hordeum,leporinum,exotic,forb,annual

compositae,hyalosperma,glutinosum.subsp.glutinosum,native,forb,annual

compositae,hyalosperma,demissum,native,forb,annual

compositae,hyalosperma,glutinosum.subsp.venustum,native,forb,annual

compositae,hydrocotyle,pilifera,native,forb,annual

compositae,hypochaeris,glabra,exotic,forb,annual

compositae,isoetopsis,graminifolia,native,forb,annual

compositae,isotropis,juncea,native,forb,annual

compositae,juncus,bufonius,exotic,graminoid,annual

compositae,lamarckia,aurea,exotic,forb,annual

compositae,lawrencella,rosea,native,graminoid,annual

compositae,lawrencella,davenportii,native,forb,annual

compositae,lepidium,bonariense,exotic,forb+tuberous,perennial

compositae,levenhookia,dubia,native,forb,annual

compositae,levenhookia,leptantha,native,forb,annual

compositae,lobelia,gibbosa,native,forb,annual

compositae,lolium,perenne,exotic,graminoid,annual

compositae,lomandra,effusa,native,forb,annual

compositae,lysimachia,arvensis,exotic,graminoid,annual

compositae,medicago,minima,exotic,forb,annual

compositae,medicago,polymorpha,exotic,graminoid,annual

crassulaceae,menkea,sphaerocarpa,native,graminoid,perennial

crassulaceae,mesembryanthemum,crystallinum,exotic,forb,annual

cyperaceae,mesembryanthemum,nodiflorum,exotic,graminoid,perennial

dilleniaceae,millotia,myosotidifolia,native,forb,annual

droseraceae,millotia,tenuifolia,native,forb,annual

droseraceae,monachather,paradoxus,native,forb,annual

droseraceae,monoculus,monstrosus,exotic,forb,annual

euphorbiaceae,moraea,flaccida,exotic,shrub,perennial

geraniaceae,moraea,setifolia,exotic,graminoid,annual

geraniaceae,myriocephalus,guerinae,native,forb,annual

geraniaceae,neurachne,alopecuroidea,native,forb,annual

geraniaceae,nicotiana,rotundifolia,native,forb,annual

goodeniaceae,ophioglossum,lusitanicum,native,forb,annual

goodeniaceae,oxalis,perennans,native,shrub,perennial

goodeniaceae,parentucellia,latifolia,exotic,forb,annual

goodeniaceae,parietaria,cardiostegia,native,forb,annual

goodeniaceae,pentameris,airoides,exotic,graminoid,annual

goodeniaceae,petrorhagia,dubia,exotic,forb,annual

goodeniaceae,pheladenia,deformis,native,forb+tuberous,perennial

goodeniaceae,phyllangium,sulcatum,native,forb,annual

haloragaceae,pimelea,imbricata,native,graminoid,annual

haloragaceae,plantago,coronopus,exotic,shrub,perennial

iridaceae,plantago,debilis,native,forb,annual

iridaceae,podolepis,capillaris,native,twiner,annual

iridaceae,podolepis,lessonii,native,forb,annual

juncaceae,podolepis,canescens,native,forb,annual

juncaginaceae,podotheca,angustifolia,native,forb,perennial

leguminosae,podotheca,gnaphalioides,native,forb,annual

leguminosae,pogonolepis,muelleriana,native,forb,annual

leguminosae,polycarpon,tetraphyllum,exotic,forb+tuberous,perennial

leguminosae,poranthera,microphylla,native,graminoid,annual

leguminosae,prasophyllum,gracile,native,forb,annual

leguminosae,ptilotus,polystachyus,native,forb,annual

loganiaceae,ptilotus,gaudichaudii,native,forb,annual

malvaceae,ptilotus,exaltatus,native,forb,annual

ophioglossaceae,ptilotus,drummondii,native,forb,annual

orchidaceae,ptilotus,spathulatus,native,forb,annual

orchidaceae,ptilotus,declinatus,native,forb,annual

orchidaceae,ptilotus,holosericeus,native,forb,annual

orchidaceae,ptilotus,sp,native,shrub,perennial

orchidaceae,quinetia,urvillei,native,graminoid,annual

orchidaceae,rapistrum,rugosum,exotic,forb,annual

orchidaceae,rhodanthe,pygmaea,native,forb,annual

orobanchaceae,rhodanthe,chlorocephala,native,forb,annual

oxalidaceae,rhodanthe,citrina,native,forb,perennial

phyllanthaceae,rhodanthe,spicata,native,forb,annual

plantaginaceae,rhodanthe,humboldtiana,native,forb,annual

plantaginaceae,rhodanthe,laevis,native,forb,annual

poaceae,rhodanthe,maryonii,native,graminoid,annual

poaceae,rhodanthe,polycephala,native,forb,annual

poaceae,rhodanthe,manglesii,native,forb,annual

poaceae,rhyncharrhena,linearis,native,forb,annual

poaceae,romulea,rosea,exotic,forb,perennial

poaceae,rostraria,pumila,exotic,forb,annual

poaceae,rytidosperma,caespitosum,native,graminoid,perennial

poaceae,santalum,spicatum,native,forb,annual

poaceae,schoenia,cassiniana,native,graminoid,perennial

poaceae,schoenus,nanus,native,forb,perennial

poaceae,senecio,glossanthus,native,shrub,perennial

poaceae,sida,sp,native,forb,annual

poaceae,silene,nocturna,exotic,forb,annual

poaceae,sonchus,oleraceus,exotic,forb,annual

poaceae,stackhousia,monogyna,native,forb,annual

poaceae,stenopetalum,lineare,native,forb,annual

poaceae,thysanotus,manglesianus,native,forb,annual

poaceae,thysanotus,rectantherus,native,forb,annual

poaceae,trachymene,pilosa,native,forb,annual

poaceae,trachymene,cyanopetala,native,forb,annual

poaceae,trachymene,ornata,native,forb,annual

poaceae,trifolium,subterraneum,exotic,forb,annual

polygonaceae,trifolium,hirtum,exotic,forb,annual

portulacaceae,trifolium,glomeratum,exotic,forb+tuberous,perennial

portulacaceae,triglochin,isingiana,native,forb,annual

portulacaceae,urospermum,picroides,exotic,forb,annual

primulaceae,ursinia,anthemoides,exotic,twiner,perennial

proteaceae,velleia,rosea,native,graminoid,perennial

pteridaceae,velleia,cycnopotamica,native,forb,annual

santalaceae,vulpia,bromoides,exotic,forb,annual

scrophulariaceae,vulpia,myuros,exotic,graminoid,annual

solanaceae,wahlenbergia,capensis,exotic,graminoid,annual

stylidiaceae,wahlenbergia,gracilenta,native,forb,annual

stylidiaceae,waitzia,acuminata,native,forb,annual

thymelaeaceae,waitzia,nitida,native,graminoid,annual

urticaceae,wurmbea,drummondii,native,forb+tuberous,perennial

xanthorrhoeaceae,wurmbea,spPaynes.Find,native,forb+rhizomatous,perennial

xanthorrhoeaceae,wurmbea,densiflora,native,graminoid,perennial

xanthorrhoeaceae,zaluzianskya,divaricata,exotic,forb,annual

zygophyllaceae,zygophyllum,iodocarpum,exotic,forb,annual

sqlite> .mode columns

sqlite> select family.family, genus.genus, species, invasive.invasive, habit.habit, life\_form.life\_form from species

...> join family on species.family = family.family\_id

...> join genus on species.genus = genus.genus\_id

...> join invasive on species.invasive = invasive.invasive\_id

...> join habit on species.habit = habit.habit\_id

...> join life\_form on species.life\_form = life\_form.life\_form\_id;

family genus species invasive habit life\_form

---------- ---------- ---------- ---------- ---------- ----------

aizoaceae actinobole uliginosum native forb annual

aizoaceae aira cupaniana exotic forb annual

amaranthac angianthus tomentosus native forb annual

amaranthac arctotheca calendula exotic forb annual

amaranthac aristida contorta native graminoid annual

amaranthac arthropodi curvipes native forb annual

amaranthac arthropodi dyeri native forb annual

amaranthac atriplex sp native forb annual

amaranthac austrostip elegantiss native graminoid perennial

amaranthac austrostip sp native graminoid annual

amaranthac austrostip sp3 native forb annual

amaranthac austrostip macalpinei native graminoid perennial

apiaceae avena barbata exotic forb annual

apocynacea bellida graminea native graminoid perennial

araliaceae blennospor drummondii native forb annual

araliaceae borya sphaerocep native forb perennial

araliaceae brachyscom iberidifol native forb annual

araliaceae brachyscom perpusilla native forb annual

asparagace brachyscom ciliaris native forb annual

asparagace brassica tournefort exotic forb annual

asparagace briza maxima exotic forb perennial

asparagace bromus rubens exotic graminoid annual

asparagace bromus sp exotic graminoid annual

asparagace bromus diandrus exotic graminoid perennial

asparagace brunonia australis native forb annual

boraginace bulbine semibarbat native forb annual

boryaceae burchardia congesta native forb annual

brassicace caesia micrantha native graminoid annual

brassicace caladenia sp native graminoid perennial

brassicace caladenia denticulat native forb+tuber perennial

brassicace caladenia roei native graminoid perennial

brassicace calandrini corrigiolo native forb annual

brassicace calandrini granulifer native forb annual

campanulac calandrini eremaea native forb annual

campanulac calocephal multifloru native forb+cormo perennial

campanulac calotis hispidula native forb annual

caryophyll calotis multicauli native forb annual

caryophyll carrichter annua exotic forb annual

caryophyll centrolepi drummondia native forb annual

celastrace centrolepi sp native forb annual

centrolepi centrolepi sp2 native forb annual

centrolepi centrolepi aristata native forb annual

centrolepi cephalipte drummondii native forb annual

centrolepi ceratogyne obionoides native graminoid annual

colchicace chamaescil versicolor native graminoid perennial

colchicace cheilanthe austrotenu native forb annual

colchicace chthonocep pseudevax native shrub perennial

colchicace cotula bipinnata exotic forb annual

compositae crassula colorata native forb annual

compositae crassula closiana native forb annual

compositae cyanicula amplexans native forb+cormo perennial

compositae cyanicula gemmata native forb+tuber perennial

compositae dampiera lavandulac native forb annual

compositae daucus glochidiat native forb annual

compositae dianella revoluta native forb annual

compositae dichopogon capillipes native forb annual

compositae drosera erythrorhi native forb+tuber perennial

compositae drosera glandulige native graminoid perennial

compositae drosera macrantha native shrub perennial

compositae echium plantagine exotic forb annual

compositae ehrharta longiflora exotic forb annual

compositae emex australis exotic graminoid perennial

compositae enchylaena tomentosa native shrub perennial

compositae erodium aureum exotic forb annual

compositae erodium botrys exotic forb annual

compositae erodium cicutarium exotic shrub perennial

compositae erodium cygnorum native forb annual

compositae erymophyll ramosum native forb annual

compositae euphorbia drummondii native forb annual

compositae gilberta tenuifolia native forb annual

compositae gilruthia osbornei native forb annual

compositae gnephosis tenuissima native forb annual

compositae gonocarpus nodulosus native graminoid annual

compositae goodenia berardiana native forb annual

compositae goodenia occidental native forb annual

compositae goodenia pusilliflo native forb annual

compositae goodenia krauseana native forb annual

compositae grevillea paniculata native shrub perennial

compositae haloragis odontocarp native forb annual

compositae hedypnois rhagadiolo exotic forb annual

compositae hibbertia glomerosa native graminoid perennial

compositae hordeum leporinum exotic forb annual

compositae hyalosperm glutinosum native forb annual

compositae hyalosperm demissum native forb annual

compositae hyalosperm glutinosum native forb annual

compositae hydrocotyl pilifera native forb annual

compositae hypochaeri glabra exotic forb annual

compositae isoetopsis graminifol native forb annual

compositae isotropis juncea native forb annual

compositae juncus bufonius exotic graminoid annual

compositae lamarckia aurea exotic forb annual

compositae lawrencell rosea native graminoid annual

compositae lawrencell davenporti native forb annual

compositae lepidium bonariense exotic forb+tuber perennial

compositae levenhooki dubia native forb annual

compositae levenhooki leptantha native forb annual

compositae lobelia gibbosa native forb annual

compositae lolium perenne exotic graminoid annual

compositae lomandra effusa native forb annual

compositae lysimachia arvensis exotic graminoid annual

compositae medicago minima exotic forb annual

compositae medicago polymorpha exotic graminoid annual

crassulace menkea sphaerocar native graminoid perennial

crassulace mesembryan crystallin exotic forb annual

cyperaceae mesembryan nodiflorum exotic graminoid perennial

dilleniace millotia myosotidif native forb annual

droseracea millotia tenuifolia native forb annual

droseracea monachathe paradoxus native forb annual

droseracea monoculus monstrosus exotic forb annual

euphorbiac moraea flaccida exotic shrub perennial

geraniacea moraea setifolia exotic graminoid annual

geraniacea myriocepha guerinae native forb annual

geraniacea neurachne alopecuroi native forb annual

geraniacea nicotiana rotundifol native forb annual

goodeniace ophiogloss lusitanicu native forb annual

goodeniace oxalis perennans native shrub perennial

goodeniace parentucel latifolia exotic forb annual

goodeniace parietaria cardiosteg native forb annual

goodeniace pentameris airoides exotic graminoid annual

goodeniace petrorhagi dubia exotic forb annual

goodeniace pheladenia deformis native forb+tuber perennial

goodeniace phyllangiu sulcatum native forb annual

haloragace pimelea imbricata native graminoid annual

haloragace plantago coronopus exotic shrub perennial

iridaceae plantago debilis native forb annual

iridaceae podolepis capillaris native twiner annual

iridaceae podolepis lessonii native forb annual

juncaceae podolepis canescens native forb annual

juncaginac podotheca angustifol native forb perennial

leguminosa podotheca gnaphalioi native forb annual

leguminosa pogonolepi muellerian native forb annual

leguminosa polycarpon tetraphyll exotic forb+tuber perennial

leguminosa poranthera microphyll native graminoid annual

leguminosa prasophyll gracile native forb annual

leguminosa ptilotus polystachy native forb annual

loganiacea ptilotus gaudichaud native forb annual

malvaceae ptilotus exaltatus native forb annual

ophiogloss ptilotus drummondii native forb annual

orchidacea ptilotus spathulatu native forb annual

orchidacea ptilotus declinatus native forb annual

orchidacea ptilotus holoserice native forb annual

orchidacea ptilotus sp native shrub perennial

orchidacea quinetia urvillei native graminoid annual

orchidacea rapistrum rugosum exotic forb annual

orchidacea rhodanthe pygmaea native forb annual

orobanchac rhodanthe chloroceph native forb annual

oxalidacea rhodanthe citrina native forb perennial

phyllantha rhodanthe spicata native forb annual

plantagina rhodanthe humboldtia native forb annual

plantagina rhodanthe laevis native forb annual

poaceae rhodanthe maryonii native graminoid annual

poaceae rhodanthe polycephal native forb annual

poaceae rhodanthe manglesii native forb annual

poaceae rhyncharrh linearis native forb annual

poaceae romulea rosea exotic forb perennial

poaceae rostraria pumila exotic forb annual

poaceae rytidosper caespitosu native graminoid perennial

poaceae santalum spicatum native forb annual

poaceae schoenia cassiniana native graminoid perennial

poaceae schoenus nanus native forb perennial

poaceae senecio glossanthu native shrub perennial

poaceae sida sp native forb annual

poaceae silene nocturna exotic forb annual

poaceae sonchus oleraceus exotic forb annual

poaceae stackhousi monogyna native forb annual

poaceae stenopetal lineare native forb annual

poaceae thysanotus manglesian native forb annual

poaceae thysanotus rectanther native forb annual

poaceae trachymene pilosa native forb annual

poaceae trachymene cyanopetal native forb annual

poaceae trachymene ornata native forb annual

poaceae trifolium subterrane exotic forb annual

polygonace trifolium hirtum exotic forb annual

portulacac trifolium glomeratum exotic forb+tuber perennial

portulacac triglochin isingiana native forb annual

portulacac urospermum picroides exotic forb annual

primulacea ursinia anthemoide exotic twiner perennial

proteaceae velleia rosea native graminoid perennial

pteridacea velleia cycnopotam native forb annual

santalacea vulpia bromoides exotic forb annual

scrophular vulpia myuros exotic graminoid annual

solanaceae wahlenberg capensis exotic graminoid annual

stylidiace wahlenberg gracilenta native forb annual

stylidiace waitzia acuminata native forb annual

thymelaeac waitzia nitida native graminoid annual

urticaceae wurmbea drummondii native forb+tuber perennial

xanthorrho wurmbea spPaynes.F native forb+rhizo perennial

xanthorrho wurmbea densiflora native graminoid perennial

xanthorrho zaluziansk divaricata exotic forb annual

zygophylla zygophyllu iodocarpum exotic forb annual

sqlite> .schema species

CREATE TABLE species(

"" TEXT,

"species\_id" TEXT,

"family" TEXT,

"genus" TEXT,

"species" TEXT,

"invasive" TEXT,

"habit" TEXT,

"life\_form" TEXT

);

sqlite> .schema genus

CREATE TABLE genus(

"" TEXT,

"genus\_id" TEXT,

"genus" TEXT

);

sqlite> select \* from genus;

genus\_id genus

---------- ---------- ----------

1 1 arctotheca

2 2 austrostip

3 3 bromus

4 4 crassula

5 5 enchylaena

6 6 hypochaeri

7 7 lolium

8 8 pentameris

9 9 actinobole

10 10 aristida

11 11 calandrini

12 12 erodium

13 13 hyalosperm

14 14 podolepis

15 15 rhodanthe

16 16 waitzia

17 17 ptilotus

18 18 blennospor

19 19 juncus

20 20 vulpia

21 21 velleia

22 22 trachymene

23 23 borya

24 24 caesia

25 25 avena

26 26 brassica

27 27 bulbine

28 28 monoculus

29 29 sonchus

30 30 brachyscom

31 31 ehrharta

32 32 millotia

33 33 pogonolepi

34 34 cephalipte

35 35 plantago

36 36 calotis

37 37 petrorhagi

38 38 hydrocotyl

39 39 medicago

40 40 senecio

41 41 atriplex

42 42 goodenia

43 43 burchardia

44 44 cheilanthe

45 45 gnephosis

46 46 ursinia

47 47 dichopogon

48 48 lawrencell

49 49 podotheca

50 50 rhyncharrh

51 51 triglochin

52 52 zygophyllu

53 53 angianthus

54 54 hordeum

55 55 trifolium

56 56 mesembryan

57 57 silene

58 58 rostraria

59 59 daucus

60 60 lamarckia

61 61 haloragis

62 62 gilberta

63 63 schoenia

64 64 ceratogyne

65 65 stenopetal

66 66 monachathe

67 67 arthropodi

68 68 zaluziansk

69 69 echium

70 70 urospermum

71 71 erymophyll

72 72 carrichter

73 73 isoetopsis

74 74 gonocarpus

75 75 sida

76 76 phyllangiu

77 77 aira

78 78 briza

79 79 hedypnois

80 80 parentucel

81 81 euphorbia

82 82 wahlenberg

83 83 moraea

84 84 rytidosper

85 85 lobelia

86 86 schoenus

87 87 neurachne

88 88 quinetia

89 89 stackhousi

90 90 prasophyll

91 91 thysanotus

92 92 poranthera

93 93 nicotiana

94 94 centrolepi

95 95 lysimachia

96 96 oxalis

97 97 pimelea

98 98 drosera

99 99 levenhooki

100 100 dampiera

101 101 rapistrum

102 102 parietaria

103 103 santalum

104 104 lomandra

105 105 ophiogloss

106 106 chthonocep

107 107 caladenia

108 108 bellida

109 109 gilruthia

110 110 menkea

111 111 wurmbea

112 112 myriocepha

113 113 emex

114 114 grevillea

115 115 romulea

116 116 dianella

117 117 chamaescil

118 118 brunonia

119 119 cotula

120 120 hibbertia

121 121 isotropis

122 122 pheladenia

123 123 cyanicula

124 124 lepidium

125 125 calocephal

126 126 polycarpon

sqlite> drop table family;

sqlite> CREATE TABLE family (

...> family\_id integer NOT NULL PRIMARY KEY,

...> family text NOT NULL);

sqlite> .mode csv

sqlite> .import family.csv family

family.csv:1: expected 2 columns but found 3 - extras ignored

family.csv:1: INSERT failed: datatype mismatch

family.csv:2: expected 2 columns but found 3 - extras ignored

family.csv:3: expected 2 columns but found 3 - extras ignored

family.csv:4: expected 2 columns but found 3 - extras ignored

family.csv:5: expected 2 columns but found 3 - extras ignored

family.csv:6: expected 2 columns but found 3 - extras ignored

family.csv:7: expected 2 columns but found 3 - extras ignored

family.csv:8: expected 2 columns but found 3 - extras ignored

family.csv:9: expected 2 columns but found 3 - extras ignored

family.csv:10: expected 2 columns but found 3 - extras ignored

family.csv:11: expected 2 columns but found 3 - extras ignored

family.csv:12: expected 2 columns but found 3 - extras ignored

family.csv:13: expected 2 columns but found 3 - extras ignored

family.csv:14: expected 2 columns but found 3 - extras ignored

family.csv:15: expected 2 columns but found 3 - extras ignored

family.csv:16: expected 2 columns but found 3 - extras ignored

family.csv:17: expected 2 columns but found 3 - extras ignored

family.csv:18: expected 2 columns but found 3 - extras ignored

family.csv:19: expected 2 columns but found 3 - extras ignored

family.csv:20: expected 2 columns but found 3 - extras ignored

family.csv:21: expected 2 columns but found 3 - extras ignored

family.csv:22: expected 2 columns but found 3 - extras ignored

family.csv:23: expected 2 columns but found 3 - extras ignored

family.csv:24: expected 2 columns but found 3 - extras ignored

family.csv:25: expected 2 columns but found 3 - extras ignored

family.csv:26: expected 2 columns but found 3 - extras ignored

family.csv:27: expected 2 columns but found 3 - extras ignored

family.csv:28: expected 2 columns but found 3 - extras ignored

family.csv:29: expected 2 columns but found 3 - extras ignored

family.csv:30: expected 2 columns but found 3 - extras ignored

family.csv:31: expected 2 columns but found 3 - extras ignored

family.csv:32: expected 2 columns but found 3 - extras ignored

family.csv:33: expected 2 columns but found 3 - extras ignored

family.csv:34: expected 2 columns but found 3 - extras ignored

family.csv:35: expected 2 columns but found 3 - extras ignored

family.csv:36: expected 2 columns but found 3 - extras ignored

family.csv:37: expected 2 columns but found 3 - extras ignored

family.csv:38: expected 2 columns but found 3 - extras ignored

family.csv:39: expected 2 columns but found 3 - extras ignored

family.csv:40: expected 2 columns but found 3 - extras ignored

family.csv:41: expected 2 columns but found 3 - extras ignored

family.csv:42: expected 2 columns but found 3 - extras ignored

family.csv:43: expected 2 columns but found 3 - extras ignored

family.csv:44: expected 2 columns but found 3 - extras ignored

family.csv:45: expected 2 columns but found 3 - extras ignored

family.csv:46: expected 2 columns but found 3 - extras ignored

family.csv:47: expected 2 columns but found 3 - extras ignored

family.csv:48: expected 2 columns but found 3 - extras ignored

family.csv:49: expected 2 columns but found 3 - extras ignored

family.csv:50: expected 2 columns but found 3 - extras ignored

sqlite> select \* from family;

family\_id,family

1,1

2,2

3,3

4,4

5,5

6,6

7,7

8,8

9,9

10,10

11,11

12,12

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48,48

49,49

sqlite> .tables

family habit plot species

field\_season invasive projects trait\_summary

genus life\_form site treatment

sqlite> DROP TABLE species;

sqlite> DROP TABLE family;

sqlite> DROP TABLE genus;

sqlite> DROP TABLE invasive;

sqlite> DROP TABLE habit;

sqlite> DROP TABLE life\_form;

sqlite> CREATE TABLE family (

...> family\_id integer NOT NULL PRIMARY KEY,

...> family text NOT NULL);

sqlite>

sqlite>

sqlite> .import family.csv family

family.csv:1: INSERT failed: datatype mismatch

sqlite>

sqlite>

sqlite> CREATE TABLE genus (

...> genus\_id integer NOT NULL PRIMARY KEY,

...> genus text NOT NULL);

sqlite>

sqlite> .import genus.csv genus

genus.csv:1: INSERT failed: datatype mismatch

sqlite>

sqlite>

sqlite> CREATE TABLE invasive (

...> invasive\_id integer NOT NULL PRIMARY KEY,

...> invasive NOT NULL);

sqlite>

sqlite> .import invasive.csv invasive

invasive.csv:1: INSERT failed: datatype mismatch

sqlite>

sqlite>

sqlite> CREATE TABLE habit (

...> habit\_id integer NOT NULL PRIMARY KEY,

...> habit text NOT NULL);

sqlite>

sqlite> .import habit.csv habit

habit.csv:1: INSERT failed: datatype mismatch

sqlite>

sqlite>

sqlite> CREATE TABLE life\_form (

...> life\_form\_id integer NOT NULL PRIMARY KEY,

...> life\_form text NOT NULL);

sqlite>

sqlite> .import life\_form.csv life\_form

life\_form.csv:1: INSERT failed: datatype mismatch

sqlite>

sqlite>

sqlite>

sqlite> -------

sqlite> CREATE TABLE species (

...> species\_id integer PRIMARY KEY,

...> family text NOT NULL REFERENCES family(family\_id),

...> genus text NOT NULL,

...> species text NOT NULL,

...> invasive integer REFERENCES invasive(invasive\_id),

...> habit integer REFERENCES habit(habit\_id),

...> life\_form integer REFERENCES life\_form(life\_form\_id));

sqlite>

sqlite> .import species.csv species;

Error: no such table: species;

sqlite> .tables

family habit plot species

field\_season invasive projects trait\_summary

genus life\_form site treatment

sqlite> select \* from family;

family\_id,family

1,compositae

2,poaceae

3,crassulaceae

4,amaranthaceae

5,portulacaceae

6,geraniaceae

7,juncaceae

8,goodeniaceae

9,araliaceae

10,boryaceae

11,xanthorrhoeaceae

12,brassicaceae

13,plantaginaceae

14,caryophyllaceae

15,leguminosae

16,colchicaceae

17,pteridaceae

18,asparagaceae

19,apocynaceae

20,juncaginaceae

21,zygophyllaceae

22,aizoaceae

23,apiaceae

24,haloragaceae

25,scrophulariaceae

26,boraginaceae

27,malvaceae

28,loganiaceae

29,orobanchaceae

30,euphorbiaceae

31,campanulaceae

32,iridaceae

33,cyperaceae

34,celastraceae

35,orchidaceae

36,phyllanthaceae

37,solanaceae

38,centrolepidaceae

39,primulaceae

40,oxalidaceae

41,thymelaeaceae

42,droseraceae

43,stylidiaceae

44,urticaceae

45,santalaceae

46,ophioglossaceae

47,polygonaceae

48,proteaceae

49,dilleniaceae

sqlite> select \* from habit;

habit\_id,habit

1,forb

2,graminoid

3,shrub

4,twiner

5,forb+tuberous

6,forb+cormous

7,forb+rhizomatous

sqlite> .mode columns;

Error: mode should be one of: ascii column csv html insert line list tabs tcl

sqlite> .mode columns

sqlite> select \* from life\_form

...> ;

life\_form\_id life\_form

------------ ----------

1 annual

2 perennial

sqlite> select \* from species;

sqlite> .schema species

CREATE TABLE species (

species\_id integer PRIMARY KEY,

family text NOT NULL REFERENCES family(family\_id),

genus text NOT NULL,

species text NOT NULL,

invasive integer REFERENCES invasive(invasive\_id),

habit integer REFERENCES habit(habit\_id),

life\_form integer REFERENCES life\_form(life\_form\_id));

sqlite> DROP TABLE species;

sqlite> CREATE TABLE species (

...> species\_id integer PRIMARY KEY,

...> family integer NOT NULL REFERENCES family(family\_id),

...> genus integer NOT NULL,

...> species integer NOT NULL,

...> invasive integer REFERENCES invasive(invasive\_id),

...> habit integer REFERENCES habit(habit\_id),

...> life\_form integer REFERENCES life\_form(life\_form\_id));

sqlite>

sqlite> .import species.csv species

species.csv:1: INSERT failed: datatype mismatch

sqlite> drop table species;

sqlite> CREATE TABLE species (

...> species\_id integer PRIMARY KEY,

...> family integer NOT NULL REFERENCES family(family\_id),

...> genus integer NOT NULL REFERENCES genus(genus\_id),

...> species integer NOT NULL,

...> invasive integer REFERENCES invasive(invasive\_id),

...> habit integer REFERENCES habit(habit\_id),

...> life\_form integer REFERENCES life\_form(life\_form\_id));

sqlite> .import species.csv species

species.csv:1: INSERT failed: datatype mismatch

sqlite> select \* from species;

species\_id family genus species invasive habit life\_form

---------- ---------- ---------- ---------- ---------- ---------- ----------

1 22 9 uliginosum 1 1 1

2 22 77 cupaniana 2 1 1

3 4 53 tomentosus 1 1 1

4 4 1 calendula 2 1 1

5 4 10 contorta 1 2 1

6 4 67 curvipes 1 1 1

7 4 67 dyeri 1 1 1

8 4 41 sp 1 1 1

9 4 2 elegantiss 1 2 2

10 4 2 sp 1 2 1

11 4 2 sp3 1 1 1

12 4 2 macalpinei 1 2 2

13 23 25 barbata 2 1 1

14 19 108 graminea 1 2 2

15 9 18 drummondii 1 1 1

16 9 23 sphaerocep 1 1 2

17 9 30 iberidifol 1 1 1

18 9 30 perpusilla 1 1 1

19 18 30 ciliaris 1 1 1

20 18 26 tournefort 2 1 1

21 18 78 maxima 2 1 2

22 18 3 rubens 2 2 1

23 18 3 sp 2 2 1

24 18 3 diandrus 2 2 2

25 18 118 australis 1 1 1

26 26 27 semibarbat 1 1 1

27 10 43 congesta 1 1 1

28 12 24 micrantha 1 2 1

29 12 107 sp 1 2 2

30 12 107 denticulat 1 5 2

31 12 107 roei 1 2 2

32 12 11 corrigiolo 1 1 1

33 12 11 granulifer 1 1 1

34 31 11 eremaea 1 1 1

35 31 125 multifloru 1 6 2

36 31 36 hispidula 1 1 1

37 14 36 multicauli 1 1 1

38 14 72 annua 2 1 1

39 14 94 drummondia 1 1 1

40 34 94 sp 1 1 1

41 38 94 sp2 1 1 1

42 38 94 aristata 1 1 1

43 38 34 drummondii 1 1 1

44 38 64 obionoides 1 2 1

45 16 117 versicolor 1 2 2

46 16 44 austrotenu 1 1 1

47 16 106 pseudevax 1 3 2

48 16 119 bipinnata 2 1 1

49 1 4 colorata 1 1 1

50 1 4 closiana 1 1 1

51 1 123 amplexans 1 6 2

52 1 123 gemmata 1 5 2

53 1 100 lavandulac 1 1 1

54 1 59 glochidiat 1 1 1

55 1 116 revoluta 1 1 1

56 1 47 capillipes 1 1 1

57 1 98 erythrorhi 1 5 2

58 1 98 glandulige 1 2 2

59 1 98 macrantha 1 3 2

60 1 69 plantagine 2 1 1

61 1 31 longiflora 2 1 1

62 1 113 australis 2 2 2

63 1 5 tomentosa 1 3 2

64 1 12 aureum 2 1 1

65 1 12 botrys 2 1 1

66 1 12 cicutarium 2 3 2

67 1 12 cygnorum 1 1 1

68 1 71 ramosum 1 1 1

69 1 81 drummondii 1 1 1

70 1 62 tenuifolia 1 1 1

71 1 109 osbornei 1 1 1

72 1 45 tenuissima 1 1 1

73 1 74 nodulosus 1 2 1

74 1 42 berardiana 1 1 1

75 1 42 occidental 1 1 1

76 1 42 pusilliflo 1 1 1

77 1 42 krauseana 1 1 1

78 1 114 paniculata 1 3 2

79 1 61 odontocarp 1 1 1

80 1 79 rhagadiolo 2 1 1

81 1 120 glomerosa 1 2 2

82 1 54 leporinum 2 1 1

83 1 13 glutinosum 1 1 1

84 1 13 demissum 1 1 1

85 1 13 glutinosum 1 1 1

86 1 38 pilifera 1 1 1

87 1 6 glabra 2 1 1

88 1 73 graminifol 1 1 1

89 1 121 juncea 1 1 1

90 1 19 bufonius 2 2 1

91 1 60 aurea 2 1 1

92 1 48 rosea 1 2 1

93 1 48 davenporti 1 1 1

94 1 124 bonariense 2 5 2

95 1 99 dubia 1 1 1

96 1 99 leptantha 1 1 1

97 1 85 gibbosa 1 1 1

98 1 7 perenne 2 2 1

99 1 104 effusa 1 1 1

100 1 95 arvensis 2 2 1

101 1 39 minima 2 1 1

102 1 39 polymorpha 2 2 1

103 3 110 sphaerocar 1 2 2

104 3 56 crystallin 2 1 1

105 33 56 nodiflorum 2 2 2

106 49 32 myosotidif 1 1 1

107 42 32 tenuifolia 1 1 1

108 42 66 paradoxus 1 1 1

109 42 28 monstrosus 2 1 1

110 30 83 flaccida 2 3 2

111 6 83 setifolia 2 2 1

112 6 112 guerinae 1 1 1

113 6 87 alopecuroi 1 1 1

114 6 93 rotundifol 1 1 1

115 8 105 lusitanicu 1 1 1

116 8 96 perennans 1 3 2

117 8 80 latifolia 2 1 1

118 8 102 cardiosteg 1 1 1

119 8 8 airoides 2 2 1

120 8 37 dubia 2 1 1

121 8 122 deformis 1 5 2

122 8 76 sulcatum 1 1 1

123 24 97 imbricata 1 2 1

124 24 35 coronopus 2 3 2

125 32 35 debilis 1 1 1

126 32 14 capillaris 1 4 1

127 32 14 lessonii 1 1 1

128 7 14 canescens 1 1 1

129 20 49 angustifol 1 1 2

130 15 49 gnaphalioi 1 1 1

131 15 33 muellerian 1 1 1

132 15 126 tetraphyll 2 5 2

133 15 92 microphyll 1 2 1

134 15 90 gracile 1 1 1

135 15 17 polystachy 1 1 1

136 28 17 gaudichaud 1 1 1

137 27 17 exaltatus 1 1 1

138 46 17 drummondii 1 1 1

139 35 17 spathulatu 1 1 1

140 35 17 declinatus 1 1 1

141 35 17 holoserice 1 1 1

142 35 17 sp 1 3 2

143 35 88 urvillei 1 2 1

144 35 101 rugosum 2 1 1

145 35 15 pygmaea 1 1 1

146 29 15 chloroceph 1 1 1

147 40 15 citrina 1 1 2

148 36 15 spicata 1 1 1

149 13 15 humboldtia 1 1 1

150 13 15 laevis 1 1 1

151 2 15 maryonii 1 2 1

152 2 15 polycephal 1 1 1

153 2 15 manglesii 1 1 1

154 2 50 linearis 1 1 1

155 2 115 rosea 2 1 2

156 2 58 pumila 2 1 1

157 2 84 caespitosu 1 2 2

158 2 103 spicatum 1 1 1

159 2 63 cassiniana 1 2 2

160 2 86 nanus 1 1 2

161 2 40 glossanthu 1 3 2

162 2 75 sp 1 1 1

163 2 57 nocturna 2 1 1

164 2 29 oleraceus 2 1 1

165 2 89 monogyna 1 1 1

166 2 65 lineare 1 1 1

167 2 91 manglesian 1 1 1

168 2 91 rectanther 1 1 1

169 2 22 pilosa 1 1 1

170 2 22 cyanopetal 1 1 1

171 2 22 ornata 1 1 1

172 2 55 subterrane 2 1 1

173 47 55 hirtum 2 1 1

174 5 55 glomeratum 2 5 2

175 5 51 isingiana 1 1 1

176 5 70 picroides 2 1 1

177 39 46 anthemoide 2 4 2

178 48 21 rosea 1 2 2

179 17 21 cycnopotam 1 1 1

180 45 20 bromoides 2 1 1

181 25 20 myuros 2 2 1

182 37 82 capensis 2 2 1

183 43 82 gracilenta 1 1 1

184 43 16 acuminata 1 1 1

185 41 16 nitida 1 2 1

186 44 111 drummondii 1 5 2

187 11 111 spPaynes.F 1 7 2

188 11 111 densiflora 1 2 2

189 11 68 divaricata 2 1 1

190 21 52 iodocarpum 2 1 1

sqlite> select family.family, genus.genus, species, invasive.invasive, habit.habit, life\_form.life\_form from species

...> join family on species.family = family.family\_id

...> join genus on species.genus = genus.genus\_id

...> join invasive on species.invasive = invasive.invasive\_id

...> join habit on species.habit = habit.habit\_id

...> join life\_form on species.life\_form = life\_form.life\_form\_id;

family genus species invasive habit life\_form

---------- ---------- ---------- ---------- ---------- ----------

aizoaceae actinobole uliginosum native forb annual

aizoaceae aira cupaniana exotic forb annual

amaranthac angianthus tomentosus native forb annual

amaranthac arctotheca calendula exotic forb annual

amaranthac aristida contorta native graminoid annual

amaranthac arthropodi curvipes native forb annual

amaranthac arthropodi dyeri native forb annual

amaranthac atriplex sp native forb annual

amaranthac austrostip elegantiss native graminoid perennial

amaranthac austrostip sp native graminoid annual

amaranthac austrostip sp3 native forb annual

amaranthac austrostip macalpinei native graminoid perennial

apiaceae avena barbata exotic forb annual

apocynacea bellida graminea native graminoid perennial

araliaceae blennospor drummondii native forb annual

araliaceae borya sphaerocep native forb perennial

araliaceae brachyscom iberidifol native forb annual

araliaceae brachyscom perpusilla native forb annual

asparagace brachyscom ciliaris native forb annual

asparagace brassica tournefort exotic forb annual

asparagace briza maxima exotic forb perennial

asparagace bromus rubens exotic graminoid annual

asparagace bromus sp exotic graminoid annual

asparagace bromus diandrus exotic graminoid perennial

asparagace brunonia australis native forb annual

boraginace bulbine semibarbat native forb annual

boryaceae burchardia congesta native forb annual

brassicace caesia micrantha native graminoid annual

brassicace caladenia sp native graminoid perennial

brassicace caladenia denticulat native forb+tuber perennial

brassicace caladenia roei native graminoid perennial

brassicace calandrini corrigiolo native forb annual

brassicace calandrini granulifer native forb annual

campanulac calandrini eremaea native forb annual

campanulac calocephal multifloru native forb+cormo perennial

campanulac calotis hispidula native forb annual

caryophyll calotis multicauli native forb annual

caryophyll carrichter annua exotic forb annual

caryophyll centrolepi drummondia native forb annual

celastrace centrolepi sp native forb annual

centrolepi centrolepi sp2 native forb annual

centrolepi centrolepi aristata native forb annual

centrolepi cephalipte drummondii native forb annual

centrolepi ceratogyne obionoides native graminoid annual

colchicace chamaescil versicolor native graminoid perennial

colchicace cheilanthe austrotenu native forb annual

colchicace chthonocep pseudevax native shrub perennial

colchicace cotula bipinnata exotic forb annual

compositae crassula colorata native forb annual

compositae crassula closiana native forb annual

compositae cyanicula amplexans native forb+cormo perennial

compositae cyanicula gemmata native forb+tuber perennial

compositae dampiera lavandulac native forb annual

compositae daucus glochidiat native forb annual

compositae dianella revoluta native forb annual

compositae dichopogon capillipes native forb annual

compositae drosera erythrorhi native forb+tuber perennial

compositae drosera glandulige native graminoid perennial

compositae drosera macrantha native shrub perennial

compositae echium plantagine exotic forb annual

compositae ehrharta longiflora exotic forb annual

compositae emex australis exotic graminoid perennial

compositae enchylaena tomentosa native shrub perennial

compositae erodium aureum exotic forb annual

compositae erodium botrys exotic forb annual

compositae erodium cicutarium exotic shrub perennial

compositae erodium cygnorum native forb annual

compositae erymophyll ramosum native forb annual

compositae euphorbia drummondii native forb annual

compositae gilberta tenuifolia native forb annual

compositae gilruthia osbornei native forb annual

compositae gnephosis tenuissima native forb annual

compositae gonocarpus nodulosus native graminoid annual

compositae goodenia berardiana native forb annual

compositae goodenia occidental native forb annual

compositae goodenia pusilliflo native forb annual

compositae goodenia krauseana native forb annual

compositae grevillea paniculata native shrub perennial

compositae haloragis odontocarp native forb annual

compositae hedypnois rhagadiolo exotic forb annual

compositae hibbertia glomerosa native graminoid perennial

compositae hordeum leporinum exotic forb annual

compositae hyalosperm glutinosum native forb annual

compositae hyalosperm demissum native forb annual

compositae hyalosperm glutinosum native forb annual

compositae hydrocotyl pilifera native forb annual

compositae hypochaeri glabra exotic forb annual

compositae isoetopsis graminifol native forb annual

compositae isotropis juncea native forb annual

compositae juncus bufonius exotic graminoid annual

compositae lamarckia aurea exotic forb annual

compositae lawrencell rosea native graminoid annual

compositae lawrencell davenporti native forb annual

compositae lepidium bonariense exotic forb+tuber perennial

compositae levenhooki dubia native forb annual

compositae levenhooki leptantha native forb annual

compositae lobelia gibbosa native forb annual

compositae lolium perenne exotic graminoid annual

compositae lomandra effusa native forb annual

compositae lysimachia arvensis exotic graminoid annual

compositae medicago minima exotic forb annual

compositae medicago polymorpha exotic graminoid annual

crassulace menkea sphaerocar native graminoid perennial

crassulace mesembryan crystallin exotic forb annual

cyperaceae mesembryan nodiflorum exotic graminoid perennial

dilleniace millotia myosotidif native forb annual

droseracea millotia tenuifolia native forb annual

droseracea monachathe paradoxus native forb annual

droseracea monoculus monstrosus exotic forb annual

euphorbiac moraea flaccida exotic shrub perennial

geraniacea moraea setifolia exotic graminoid annual

geraniacea myriocepha guerinae native forb annual

geraniacea neurachne alopecuroi native forb annual

geraniacea nicotiana rotundifol native forb annual

goodeniace ophiogloss lusitanicu native forb annual

goodeniace oxalis perennans native shrub perennial

goodeniace parentucel latifolia exotic forb annual

goodeniace parietaria cardiosteg native forb annual

goodeniace pentameris airoides exotic graminoid annual

goodeniace petrorhagi dubia exotic forb annual

goodeniace pheladenia deformis native forb+tuber perennial

goodeniace phyllangiu sulcatum native forb annual

haloragace pimelea imbricata native graminoid annual

haloragace plantago coronopus exotic shrub perennial

iridaceae plantago debilis native forb annual

iridaceae podolepis capillaris native twiner annual

iridaceae podolepis lessonii native forb annual

juncaceae podolepis canescens native forb annual

juncaginac podotheca angustifol native forb perennial

leguminosa podotheca gnaphalioi native forb annual

leguminosa pogonolepi muellerian native forb annual

leguminosa polycarpon tetraphyll exotic forb+tuber perennial

leguminosa poranthera microphyll native graminoid annual

leguminosa prasophyll gracile native forb annual

leguminosa ptilotus polystachy native forb annual

loganiacea ptilotus gaudichaud native forb annual

malvaceae ptilotus exaltatus native forb annual

ophiogloss ptilotus drummondii native forb annual

orchidacea ptilotus spathulatu native forb annual

orchidacea ptilotus declinatus native forb annual

orchidacea ptilotus holoserice native forb annual

orchidacea ptilotus sp native shrub perennial

orchidacea quinetia urvillei native graminoid annual

orchidacea rapistrum rugosum exotic forb annual

orchidacea rhodanthe pygmaea native forb annual

orobanchac rhodanthe chloroceph native forb annual

oxalidacea rhodanthe citrina native forb perennial

phyllantha rhodanthe spicata native forb annual

plantagina rhodanthe humboldtia native forb annual

plantagina rhodanthe laevis native forb annual

poaceae rhodanthe maryonii native graminoid annual

poaceae rhodanthe polycephal native forb annual

poaceae rhodanthe manglesii native forb annual

poaceae rhyncharrh linearis native forb annual

poaceae romulea rosea exotic forb perennial

poaceae rostraria pumila exotic forb annual

poaceae rytidosper caespitosu native graminoid perennial

poaceae santalum spicatum native forb annual

poaceae schoenia cassiniana native graminoid perennial

poaceae schoenus nanus native forb perennial

poaceae senecio glossanthu native shrub perennial

poaceae sida sp native forb annual

poaceae silene nocturna exotic forb annual

poaceae sonchus oleraceus exotic forb annual

poaceae stackhousi monogyna native forb annual

poaceae stenopetal lineare native forb annual

poaceae thysanotus manglesian native forb annual

poaceae thysanotus rectanther native forb annual

poaceae trachymene pilosa native forb annual

poaceae trachymene cyanopetal native forb annual

poaceae trachymene ornata native forb annual

poaceae trifolium subterrane exotic forb annual

polygonace trifolium hirtum exotic forb annual

portulacac trifolium glomeratum exotic forb+tuber perennial

portulacac triglochin isingiana native forb annual

portulacac urospermum picroides exotic forb annual

primulacea ursinia anthemoide exotic twiner perennial

proteaceae velleia rosea native graminoid perennial

pteridacea velleia cycnopotam native forb annual

santalacea vulpia bromoides exotic forb annual

scrophular vulpia myuros exotic graminoid annual

solanaceae wahlenberg capensis exotic graminoid annual

stylidiace wahlenberg gracilenta native forb annual

stylidiace waitzia acuminata native forb annual

thymelaeac waitzia nitida native graminoid annual

urticaceae wurmbea drummondii native forb+tuber perennial

xanthorrho wurmbea spPaynes.F native forb+rhizo perennial

xanthorrho wurmbea densiflora native graminoid perennial

xanthorrho zaluziansk divaricata exotic forb annual

zygophylla zygophyllu iodocarpum exotic forb annual

sqlite> select family.family, genus.genus, species, invasive.invasive, habit.habit, life\_form.life\_form from species

...> order by genus

...> join family on species.family = family.family\_id

...> join genus on species.genus = genus.genus\_id

...> join invasive on species.invasive = invasive.invasive\_id

...> join habit on species.habit = habit.habit\_id

...> join life\_form on species.life\_form = life\_form.life\_form\_id;

Error: near "join": syntax error

sqlite> select family.family, genus.genus, species, invasive.invasive, habit.habit, life\_form.life\_form from species

...> join family on species.family = family.family\_id

...> join genus on species.genus = genus.genus\_id

...> join invasive on species.invasive = invasive.invasive\_id

...> join habit on species.habit = habit.habit\_id

...> join life\_form on species.life\_form = life\_form.life\_form\_id

...> order by genus;

Error: ambiguous column name: genus

sqlite> select family.family, genus.genus, species, invasive.invasive, habit.habit, life\_form.life\_form from species

...> join family on species.family = family.family\_id

...> join genus on species.genus = genus.genus\_id

...> join invasive on species.invasive = invasive.invasive\_id

...> join habit on species.habit = habit.habit\_id

...> join life\_form on species.life\_form = life\_form.life\_form\_id

...> order by genus.genus;

family genus species invasive habit life\_form

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aizoaceae actinobole uliginosum native forb annual

aizoaceae aira cupaniana exotic forb annual

amaranthac angianthus tomentosus native forb annual

amaranthac arctotheca calendula exotic forb annual

amaranthac aristida contorta native graminoid annual

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amaranthac austrostip sp3 native forb annual

amaranthac austrostip macalpinei native graminoid perennial

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compositae crassula colorata native forb annual

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compositae dampiera lavandulac native forb annual

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compositae dichopogon capillipes native forb annual

compositae drosera erythrorhi native forb+tuber perennial

compositae drosera glandulige native graminoid perennial

compositae drosera macrantha native shrub perennial

compositae echium plantagine exotic forb annual

compositae ehrharta longiflora exotic forb annual

compositae emex australis exotic graminoid perennial

compositae enchylaena tomentosa native shrub perennial

compositae erodium aureum exotic forb annual

compositae erodium botrys exotic forb annual

compositae erodium cicutarium exotic shrub perennial

compositae erodium cygnorum native forb annual

compositae erymophyll ramosum native forb annual

compositae euphorbia drummondii native forb annual

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compositae gilruthia osbornei native forb annual

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compositae goodenia berardiana native forb annual

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compositae hyalosperm glutinosum native forb annual

compositae hyalosperm demissum native forb annual

compositae hyalosperm glutinosum native forb annual

compositae hydrocotyl pilifera native forb annual

compositae hypochaeri glabra exotic forb annual

compositae isoetopsis graminifol native forb annual

compositae isotropis juncea native forb annual

compositae juncus bufonius exotic graminoid annual

compositae lamarckia aurea exotic forb annual

compositae lawrencell rosea native graminoid annual

compositae lawrencell davenporti native forb annual

compositae lepidium bonariense exotic forb+tuber perennial

compositae levenhooki dubia native forb annual

compositae levenhooki leptantha native forb annual

compositae lobelia gibbosa native forb annual

compositae lolium perenne exotic graminoid annual

compositae lomandra effusa native forb annual

compositae lysimachia arvensis exotic graminoid annual

compositae medicago minima exotic forb annual

compositae medicago polymorpha exotic graminoid annual

crassulace menkea sphaerocar native graminoid perennial

crassulace mesembryan crystallin exotic forb annual

cyperaceae mesembryan nodiflorum exotic graminoid perennial

dilleniace millotia myosotidif native forb annual

droseracea millotia tenuifolia native forb annual

droseracea monachathe paradoxus native forb annual

droseracea monoculus monstrosus exotic forb annual

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goodeniace ophiogloss lusitanicu native forb annual

goodeniace oxalis perennans native shrub perennial

goodeniace parentucel latifolia exotic forb annual

goodeniace parietaria cardiosteg native forb annual

goodeniace pentameris airoides exotic graminoid annual

goodeniace petrorhagi dubia exotic forb annual

goodeniace pheladenia deformis native forb+tuber perennial

goodeniace phyllangiu sulcatum native forb annual

haloragace pimelea imbricata native graminoid annual

haloragace plantago coronopus exotic shrub perennial

iridaceae plantago debilis native forb annual

iridaceae podolepis capillaris native twiner annual

iridaceae podolepis lessonii native forb annual

juncaceae podolepis canescens native forb annual

juncaginac podotheca angustifol native forb perennial

leguminosa podotheca gnaphalioi native forb annual

leguminosa pogonolepi muellerian native forb annual

leguminosa polycarpon tetraphyll exotic forb+tuber perennial

leguminosa poranthera microphyll native graminoid annual

leguminosa prasophyll gracile native forb annual

leguminosa ptilotus polystachy native forb annual

loganiacea ptilotus gaudichaud native forb annual

malvaceae ptilotus exaltatus native forb annual

ophiogloss ptilotus drummondii native forb annual

orchidacea ptilotus spathulatu native forb annual

orchidacea ptilotus declinatus native forb annual

orchidacea ptilotus holoserice native forb annual

orchidacea ptilotus sp native shrub perennial

orchidacea quinetia urvillei native graminoid annual

orchidacea rapistrum rugosum exotic forb annual

orchidacea rhodanthe pygmaea native forb annual

orobanchac rhodanthe chloroceph native forb annual

oxalidacea rhodanthe citrina native forb perennial

phyllantha rhodanthe spicata native forb annual

plantagina rhodanthe humboldtia native forb annual

plantagina rhodanthe laevis native forb annual

poaceae rhodanthe maryonii native graminoid annual

poaceae rhodanthe polycephal native forb annual

poaceae rhodanthe manglesii native forb annual

poaceae rhyncharrh linearis native forb annual

poaceae romulea rosea exotic forb perennial

poaceae rostraria pumila exotic forb annual

poaceae rytidosper caespitosu native graminoid perennial

poaceae santalum spicatum native forb annual

poaceae schoenia cassiniana native graminoid perennial

poaceae schoenus nanus native forb perennial

poaceae senecio glossanthu native shrub perennial

poaceae sida sp native forb annual

poaceae silene nocturna exotic forb annual

poaceae sonchus oleraceus exotic forb annual

poaceae stackhousi monogyna native forb annual

poaceae stenopetal lineare native forb annual

poaceae thysanotus manglesian native forb annual

poaceae thysanotus rectanther native forb annual

poaceae trachymene pilosa native forb annual

poaceae trachymene cyanopetal native forb annual

poaceae trachymene ornata native forb annual

poaceae trifolium subterrane exotic forb annual

polygonace trifolium hirtum exotic forb annual

portulacac trifolium glomeratum exotic forb+tuber perennial

portulacac triglochin isingiana native forb annual

portulacac urospermum picroides exotic forb annual

primulacea ursinia anthemoide exotic twiner perennial

proteaceae velleia rosea native graminoid perennial

pteridacea velleia cycnopotam native forb annual

santalacea vulpia bromoides exotic forb annual

scrophular vulpia myuros exotic graminoid annual

solanaceae wahlenberg capensis exotic graminoid annual

stylidiace wahlenberg gracilenta native forb annual

stylidiace waitzia acuminata native forb annual

thymelaeac waitzia nitida native graminoid annual

urticaceae wurmbea drummondii native forb+tuber perennial

xanthorrho wurmbea spPaynes.F native forb+rhizo perennial

xanthorrho wurmbea densiflora native graminoid perennial

xanthorrho zaluziansk divaricata exotic forb annual

zygophylla zygophyllu iodocarpum exotic forb annual

sqlite> select family.family, genus.genus, species, invasive.invasive, habit.habit, life\_form.life\_form from species

...> join family on species.family = family.family\_id

...> join genus on species.genus = genus.genus\_id

...> join invasive on species.invasive = invasive.invasive\_id

...> join habit on species.habit = habit.habit\_id

sqlite> DROP TABLE species;

sqlite> DROP TABLE family;

sqlite> DROP TABLE genus;

sqlite> DROP TABLE invasive;

sqlite> DROP TABLE habit;

sqlite> DROP TABLE life\_form;

sqlite> .tables

field\_season projects trait\_summary

plot site treatment

sqlite> CREATE TABLE family (

...> family\_id integer NOT NULL PRIMARY KEY,

...> family text NOT NULL);

sqlite> .import family.csv family

family.csv:1: INSERT failed: datatype mismatch

sqlite> .import family.csv family

family.csv:1: INSERT failed: datatype mismatch

family.csv:2: INSERT failed: UNIQUE constraint failed: family.family\_id

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sqlite> drop table family;

sqlite> CREATE TABLE family (

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...> family\_id integer PRIMARY KEY,

...> family text NOT NULL);

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sqlite>

sqlite> CREATE TEMP TABLE fam\_temp(

...> family text NOT NULL);

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sqlite> .separator ,

sqlite> .import family.csv fam\_temp

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sqlite> INSERT INTO family(family) SELECT \* FROM fam\_temp;

sqlite> DROP TABLE fam\_temp;

sqlite> drop table family;

sqlite> CREATE TABLE family (

...> family\_id integer PRIMARY KEY,

...> family text NOT NULL);

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sqlite> DROP TABLE fam\_temp;

sqlite> drop table family;

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sqlite> .import family.csv fam\_temp

sqlite> INSERT INTO family(family) SELECT \* FROM fam\_temp;

sqlite> DROP TABLE fam\_temp;

sqlite> select \* from family;

family\_id,family

1,family\_id

2,1

3,2

4,3

5,4

6,5

7,6

8,7

9,8

10,9

11,10

12,11

13,12

14,13

15,14

16,15

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35,34

36,35

37,36

38,37

39,38

40,39

41,40

42,41

43,42

44,43

45,44

46,45

47,46

48,47

49,48

50,49

51,family

52,compositae

53,poaceae

54,crassulaceae

55,amaranthaceae

56,portulacaceae

57,geraniaceae

58,juncaceae

59,goodeniaceae

60,araliaceae

61,boryaceae

62,xanthorrhoeaceae

63,brassicaceae

64,plantaginaceae

65,caryophyllaceae

66,leguminosae

67,colchicaceae

68,pteridaceae

69,asparagaceae

70,apocynaceae

71,juncaginaceae

72,zygophyllaceae

73,aizoaceae

74,apiaceae

75,haloragaceae

76,scrophulariaceae

77,boraginaceae

78,malvaceae

79,loganiaceae

80,orobanchaceae

81,euphorbiaceae

82,campanulaceae

83,iridaceae

84,cyperaceae

85,celastraceae

86,orchidaceae

87,phyllanthaceae

88,solanaceae

89,centrolepidaceae

90,primulaceae

91,oxalidaceae

92,thymelaeaceae

93,droseraceae

94,stylidiaceae

95,urticaceae

96,santalaceae

97,ophioglossaceae

98,polygonaceae

99,proteaceae

100,dilleniaceae

sqlite> .mode columns

sqlite>

sqlite> select \* from family;

family\_id family

---------- ----------

1 family\_id

2 1

3 2

4 3

5 4

6 5

7 6

8 7

9 8

10 9

11 10

12 11

13 12

14 13

15 14

16 15

17 16

18 17

19 18

20 19

21 20

22 21

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34 33

35 34

36 35

37 36

38 37

39 38

40 39

41 40

42 41

43 42

44 43

45 44

46 45

47 46

48 47

49 48

50 49

51 family

52 compositae

53 poaceae

54 crassulace

55 amaranthac

56 portulacac

57 geraniacea

58 juncaceae

59 goodeniace

60 araliaceae

61 boryaceae

62 xanthorrho

63 brassicace

64 plantagina

65 caryophyll

66 leguminosa

67 colchicace

68 pteridacea

69 asparagace

70 apocynacea

71 juncaginac

72 zygophylla

73 aizoaceae

74 apiaceae

75 haloragace

76 scrophular

77 boraginace

78 malvaceae

79 loganiacea

80 orobanchac

81 euphorbiac

82 campanulac

83 iridaceae

84 cyperaceae

85 celastrace

86 orchidacea

87 phyllantha

88 solanaceae

89 centrolepi

90 primulacea

91 oxalidacea

92 thymelaeac

93 droseracea

94 stylidiace

95 urticaceae

96 santalacea

97 ophiogloss

98 polygonace

99 proteaceae

100 dilleniace

sqlite> drop table fam\_temp;

Error: no such table: fam\_temp

sqlite> drop table family;

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...> family\_id integer PRIMARY KEY,

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sqlite> CREATE TEMP TABLE fam\_temp(

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sqlite> .mode csv

sqlite> .separator ,

sqlite> .import family.csv fam\_temp

sqlite> INSERT INTO family(family) SELECT \* FROM fam\_temp;

sqlite> select \* from family;

family\_id,family

1,family

2,compositae

3,poaceae

4,crassulaceae

5,amaranthaceae

6,portulacaceae

7,geraniaceae

8,juncaceae

9,goodeniaceae

10,araliaceae

11,boryaceae

12,xanthorrhoeaceae

13,brassicaceae

14,plantaginaceae

15,caryophyllaceae

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28,malvaceae

29,loganiaceae

30,orobanchaceae

31,euphorbiaceae

32,campanulaceae

33,iridaceae

34,cyperaceae

35,celastraceae

36,orchidaceae

37,phyllanthaceae

38,solanaceae

39,centrolepidaceae

40,primulaceae

41,oxalidaceae

42,thymelaeaceae

43,droseraceae

44,stylidiaceae

45,urticaceae

46,santalaceae

47,ophioglossaceae

48,polygonaceae

49,proteaceae

50,dilleniaceae

sqlite> DROP TABLE fam\_temp;

sqlite> CREATE TABLE genus (

...> genus\_id integer NOT NULL PRIMARY KEY,

...> genus text NOT NULL);

sqlite> REATE TEMP TABLE gen\_temp(

...> genus text NOT NULL);

Error: near "REATE": syntax error

sqlite> CREATE TEMP TABLE gen\_temp(

...> genus text NOT NULL);

sqlite> .mode csv

sqlite> .separator ,

sqlite> .import genus.csv gen\_temp

sqlite> INSERT INTO genus(genus) SELECT \* FROM gen\_temp;

sqlite> select \* from genus;

genus\_id,genus

1,genus

2,arctotheca

3,austrostipa

4,bromus

5,crassula

6,enchylaena

7,hypochaeris

8,lolium

9,pentameris

10,actinobole

11,aristida

12,calandrinia

13,erodium

14,hyalosperma

15,podolepis

16,rhodanthe

17,waitzia

18,ptilotus

19,blennospora

20,juncus

21,vulpia

22,velleia

23,trachymene

24,borya

25,caesia

26,avena

27,brassica

28,bulbine

29,monoculus

30,sonchus

31,brachyscome

32,ehrharta

33,millotia

34,pogonolepis

35,cephalipterum

36,plantago

37,calotis

38,petrorhagia

39,hydrocotyle

40,medicago

41,senecio

42,atriplex

43,goodenia

44,burchardia

45,cheilanthes

46,gnephosis

47,ursinia

48,dichopogon

49,lawrencella

50,podotheca

51,rhyncharrhena

52,triglochin

53,zygophyllum

54,angianthus

55,hordeum

56,trifolium

57,mesembryanthemum

58,silene

59,rostraria

60,daucus

61,lamarckia

62,haloragis

63,gilberta

64,schoenia

65,ceratogyne

66,stenopetalum

67,monachather

68,arthropodium

69,zaluzianskya

70,echium

71,urospermum

72,erymophyllum

73,carrichtera

74,isoetopsis

75,gonocarpus

76,sida

77,phyllangium

78,aira

79,briza

80,hedypnois

81,parentucellia

82,euphorbia

83,wahlenbergia

84,moraea

85,rytidosperma

86,lobelia

87,schoenus

88,neurachne

89,quinetia

90,stackhousia

91,prasophyllum

92,thysanotus

93,poranthera

94,nicotiana

95,centrolepis

96,lysimachia

97,oxalis

98,pimelea

99,drosera

100,levenhookia

101,dampiera

102,rapistrum

103,parietaria

104,santalum

105,lomandra

106,ophioglossum

107,chthonocephalus

108,caladenia

109,bellida

110,gilruthia

111,menkea

112,wurmbea

113,myriocephalus

114,emex

115,grevillea

116,romulea

117,dianella

118,chamaescilla

119,brunonia

120,cotula

121,hibbertia

122,isotropis

123,pheladenia

124,cyanicula

125,lepidium

126,calocephalus

127,polycarpon

sqlite> DROP TABLE gen\_temp;

sqlite> CREATE TABLE invasive (

...> invasive\_id integer NOT NULL PRIMARY KEY,

...> invasive NOT NULL);

sqlite> CREATE TEMP TABLE inv\_temp(

...> invasive text NOT NULL);

sqlite> .mode csv

sqlite> .separator ,

sqlite> .import invasive.csv inv\_temp

sqlite> INSERT INTO invasive(invasive) SELECT \* FROM inv\_temp;

sqlite> DROP TABLE inv\_temp;

sqlite> CREATE TABLE habit (

...> habit\_id integer NOT NULL PRIMARY KEY,

...> habit text NOT NULL);

sqlite>

sqlite> CREATE TEMP TABLE hab\_temp(

...> habit text NOT NULL);

sqlite> .mode csv

sqlite> .separator ,

sqlite> .import habit.csv hab\_temp

sqlite> INSERT INTO habit(habit) SELECT \* FROM hab\_temp;

sqlite> DROP TABLE hab\_temp;

sqlite> CREATE TABLE life\_form (

...> life\_form\_id integer NOT NULL PRIMARY KEY,

...> life\_form text NOT NULL);

sqlite>

sqlite> CREATE TEMP TABLE lf\_temp(

...> life\_form text NOT NULL);

sqlite> .mode csv

sqlite> .separator ,

sqlite> .import life\_form.csv lf\_temp

sqlite> INSERT INTO life\_form(life\_form) SELECT \* FROM lf\_temp;

sqlite> DROP TABLE lf\_temp;

sqlite> CREATE TABLE species (

...> species\_id integer PRIMARY KEY,

...> family integer NOT NULL REFERENCES family(family\_id),

...> genus integer NOT NULL REFERENCES genus(genus\_id),

...> species integer NOT NULL,

...> invasive integer REFERENCES invasive(invasive\_id),

...> habit integer REFERENCES habit(habit\_id),

...> life\_form integer REFERENCES life\_form(life\_form\_id));

sqlite>

sqlite> CREATE TEMP TABLE sp\_temp(

...> species text NOT NULL);

sqlite> .mode csv

sqlite> .separator ,

sqlite> .import species.csv sp\_temp

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sqlite> DROP TABLE sp\_temp;

sqlite> CREATE TEMP TABLE sp\_temp(

...> family integer NOT NULL REFERENCES family(family\_id),

...> genus integer NOT NULL REFERENCES genus(genus\_id),

...> species integer NOT NULL,

...> invasive integer REFERENCES invasive(invasive\_id),

...> habit integer REFERENCES habit(habit\_id),

...> life\_form integer REFERENCES life\_form(life\_form\_id));

sqlite> .mode csv

sqlite> .separator ,

sqlite> .import species.csv sp\_temp

sqlite> INSERT INTO species(species) SELECT \* FROM sp\_temp;

Error: 6 values for 1 columns

sqlite> drop table species;

sqlite> drop table sp\_temp;

sqlite> CREATE TABLE species (

...> species\_id integer PRIMARY KEY,

...> family integer NOT NULL REFERENCES family(family\_id),

...> genus integer NOT NULL REFERENCES genus(genus\_id),

...> species integer NOT NULL,

...> invasive integer REFERENCES invasive(invasive\_id),

...> habit integer REFERENCES habit(habit\_id),

...> life\_form integer REFERENCES life\_form(life\_form\_id));

sqlite>

sqlite> CREATE TEMP TABLE sp\_temp(

...> family integer NOT NULL REFERENCES family(family\_id),

...> genus integer NOT NULL REFERENCES genus(genus\_id),

...> species integer NOT NULL,

...> invasive integer REFERENCES invasive(invasive\_id),

...> habit integer REFERENCES habit(habit\_id),

...> life\_form integer REFERENCES life\_form(life\_form\_id));

sqlite> .mode csv

sqlite> .separator ,

sqlite> .import species.csv sp\_temp

sqlite> INSERT INTO species(family, genus, species, invasive, habit, life\_form) SELECT \* FROM sp\_temp;

sqlite> DROP TABLE sp\_temp;

sqlite> select family.family, genus.genus, species, invasive.invasive, habit.habit, life\_form.life\_form from species

...> join family on species.family = family.family\_id

...> join genus on species.genus = genus.genus\_id

...> join invasive on species.invasive = invasive.invasive\_id

...> join habit on species.habit = habit.habit\_id

...> join life\_form on species.life\_form = life\_form.life\_form\_id;

family,genus,species,invasive,habit,life\_form

zygophyllaceae,pentameris,uliginosum,invasive,habit,life\_form

zygophyllaceae,phyllangium,cupaniana,native,habit,life\_form

crassulaceae,zygophyllum,tomentosus,invasive,habit,life\_form

crassulaceae,genus,calendula,native,habit,life\_form

crassulaceae,actinobole,contorta,invasive,forb,life\_form

crassulaceae,monachather,curvipes,invasive,habit,life\_form

crassulaceae,monachather,dyeri,invasive,habit,life\_form

crassulaceae,senecio,sp,invasive,habit,life\_form

crassulaceae,arctotheca,elegantissima,invasive,forb,annual

crassulaceae,arctotheca,sp,invasive,forb,life\_form

crassulaceae,arctotheca,sp3,invasive,habit,life\_form

crassulaceae,arctotheca,macalpinei,invasive,forb,annual

aizoaceae,caesia,barbata,native,habit,life\_form

asparagaceae,caladenia,graminea,invasive,forb,annual

goodeniaceae,ptilotus,drummondii,invasive,habit,life\_form

goodeniaceae,trachymene,sphaerocephala,invasive,habit,annual

goodeniaceae,sonchus,iberidifolia,invasive,habit,life\_form

goodeniaceae,sonchus,perpusilla,invasive,habit,life\_form

pteridaceae,sonchus,ciliaris,invasive,habit,life\_form

pteridaceae,avena,tournefortii,native,habit,life\_form

pteridaceae,aira,maxima,native,habit,annual

pteridaceae,austrostipa,rubens,native,forb,life\_form

pteridaceae,austrostipa,sp,native,forb,life\_form

pteridaceae,austrostipa,diandrus,native,forb,annual

pteridaceae,chamaescilla,australis,invasive,habit,life\_form

scrophulariaceae,brassica,semibarbata,invasive,habit,life\_form

araliaceae,goodenia,congesta,invasive,habit,life\_form

xanthorrhoeaceae,borya,micrantha,invasive,forb,life\_form

xanthorrhoeaceae,chthonocephalus,sp,invasive,forb,annual

xanthorrhoeaceae,chthonocephalus,denticulata,invasive,twiner,annual

xanthorrhoeaceae,chthonocephalus,roei,invasive,forb,annual

xanthorrhoeaceae,aristida,corrigioloides,invasive,habit,life\_form

xanthorrhoeaceae,aristida,granulifera,invasive,habit,life\_form

euphorbiaceae,aristida,eremaea,invasive,habit,life\_form

euphorbiaceae,lepidium,multiflorus,invasive,forb+tuberous,annual

euphorbiaceae,plantago,hispidula,invasive,habit,life\_form

plantaginaceae,plantago,multicaulis,invasive,habit,life\_form

plantaginaceae,erymophyllum,annua,native,habit,life\_form

plantaginaceae,nicotiana,drummondiana,invasive,habit,life\_form

cyperaceae,nicotiana,sp,invasive,habit,life\_form

solanaceae,nicotiana,sp2,invasive,habit,life\_form

solanaceae,nicotiana,aristata,invasive,habit,life\_form

solanaceae,pogonolepis,drummondii,invasive,habit,life\_form

solanaceae,schoenia,obionoides,invasive,forb,life\_form

leguminosae,dianella,versicolor,invasive,forb,annual

leguminosae,burchardia,austrotenuifolia,invasive,habit,life\_form

leguminosae,ophioglossum,pseudevax,invasive,graminoid,annual

leguminosae,brunonia,bipinnata,native,habit,life\_form

family,bromus,colorata,invasive,habit,life\_form

family,bromus,closiana,invasive,habit,life\_form

family,pheladenia,amplexans,invasive,forb+tuberous,annual

family,pheladenia,gemmata,invasive,twiner,annual

family,levenhookia,lavandulacea,invasive,habit,life\_form

family,rostraria,glochidiatus,invasive,habit,life\_form

family,romulea,revoluta,invasive,habit,life\_form

family,ursinia,capillipes,invasive,habit,life\_form

family,pimelea,erythrorhiza,invasive,twiner,annual

family,pimelea,glanduligera,invasive,forb,annual

family,pimelea,macrantha,invasive,graminoid,annual

family,zaluzianskya,plantagineum,native,habit,life\_form

family,brachyscome,longiflora,native,habit,life\_form

family,myriocephalus,australis,native,forb,annual

family,crassula,tomentosa,invasive,graminoid,annual

family,calandrinia,aureum,native,habit,life\_form

family,calandrinia,botrys,native,habit,life\_form

family,calandrinia,cicutarium,native,graminoid,annual

family,calandrinia,cygnorum,invasive,habit,life\_form

family,urospermum,ramosum,invasive,habit,life\_form

family,parentucellia,drummondii,invasive,habit,life\_form

family,haloragis,tenuifolia,invasive,habit,life\_form

family,bellida,osbornei,invasive,habit,life\_form

family,cheilanthes,tenuissima,invasive,habit,life\_form

family,isoetopsis,nodulosus,invasive,forb,life\_form

family,atriplex,berardiana,invasive,habit,life\_form

family,atriplex,occidentalis,invasive,habit,life\_form

family,atriplex,pusilliflora,invasive,habit,life\_form

family,atriplex,krauseana,invasive,habit,life\_form

family,emex,paniculata,invasive,graminoid,annual

family,lamarckia,odontocarpa,invasive,habit,life\_form

family,briza,rhagadioloides,native,habit,life\_form

family,cotula,glomerosa,invasive,forb,annual

family,angianthus,leporinum,native,habit,life\_form

family,erodium,glutinosum.subsp.glutinosum,invasive,habit,life\_form

family,erodium,demissum,invasive,habit,life\_form

family,erodium,glutinosum.subsp.venustum,invasive,habit,life\_form

family,petrorhagia,pilifera,invasive,habit,life\_form

family,enchylaena,glabra,native,habit,life\_form

family,carrichtera,graminifolia,invasive,habit,life\_form

family,hibbertia,juncea,invasive,habit,life\_form

family,blennospora,bufonius,native,forb,life\_form

family,daucus,aurea,native,habit,life\_form

family,dichopogon,rosea,invasive,forb,life\_form

family,dichopogon,davenportii,invasive,habit,life\_form

family,cyanicula,bonariense,native,twiner,annual

family,drosera,dubia,invasive,habit,life\_form

family,drosera,leptantha,invasive,habit,life\_form

family,rytidosperma,gibbosa,invasive,habit,life\_form

family,hypochaeris,perenne,native,forb,life\_form

family,santalum,effusa,invasive,habit,life\_form

family,centrolepis,arvensis,native,forb,life\_form

family,hydrocotyle,minima,native,habit,life\_form

family,hydrocotyle,polymorpha,native,forb,life\_form

poaceae,gilruthia,sphaerocarpa,invasive,forb,annual

poaceae,trifolium,crystallinum,native,habit,life\_form

iridaceae,trifolium,nodiflorum,native,forb,annual

proteaceae,ehrharta,myosotidifolia,invasive,habit,life\_form

thymelaeaceae,ehrharta,tenuifolia,invasive,habit,life\_form

thymelaeaceae,stenopetalum,paradoxus,invasive,habit,life\_form

thymelaeaceae,bulbine,monstrosus,native,habit,life\_form

orobanchaceae,wahlenbergia,flaccida,native,graminoid,annual

portulacaceae,wahlenbergia,setifolia,native,forb,life\_form

portulacaceae,wurmbea,guerinae,invasive,habit,life\_form

portulacaceae,schoenus,alopecuroidea,invasive,habit,life\_form

portulacaceae,poranthera,rotundifolia,invasive,habit,life\_form

juncaceae,lomandra,lusitanicum,invasive,habit,life\_form

juncaceae,lysimachia,perennans,invasive,graminoid,annual

juncaceae,hedypnois,latifolia,native,habit,life\_form

juncaceae,rapistrum,cardiostegia,invasive,habit,life\_form

juncaceae,lolium,airoides,native,forb,life\_form

juncaceae,calotis,dubia,native,habit,life\_form

juncaceae,isotropis,deformis,invasive,twiner,annual

juncaceae,sida,sulcatum,invasive,habit,life\_form

apiaceae,oxalis,imbricata,invasive,forb,life\_form

apiaceae,cephalipterum,coronopus,native,graminoid,annual

campanulaceae,cephalipterum,debilis,invasive,habit,life\_form

campanulaceae,hyalosperma,capillaris,invasive,shrub,life\_form

campanulaceae,hyalosperma,lessonii,invasive,habit,life\_form

geraniaceae,hyalosperma,canescens,invasive,habit,life\_form

apocynaceae,lawrencella,angustifolia,invasive,habit,annual

caryophyllaceae,lawrencella,gnaphalioides,invasive,habit,life\_form

caryophyllaceae,millotia,muelleriana,invasive,habit,life\_form

caryophyllaceae,calocephalus,tetraphyllum,native,twiner,annual

caryophyllaceae,thysanotus,microphylla,invasive,forb,life\_form

caryophyllaceae,stackhousia,gracile,invasive,habit,life\_form

caryophyllaceae,waitzia,polystachyus,invasive,habit,life\_form

malvaceae,waitzia,gaudichaudii,invasive,habit,life\_form

boraginaceae,waitzia,exaltatus,invasive,habit,life\_form

santalaceae,waitzia,drummondii,invasive,habit,life\_form

celastraceae,waitzia,spathulatus,invasive,habit,life\_form

celastraceae,waitzia,declinatus,invasive,habit,life\_form

celastraceae,waitzia,holosericeus,invasive,habit,life\_form

celastraceae,waitzia,sp,invasive,graminoid,annual

celastraceae,neurachne,urvillei,invasive,forb,life\_form

celastraceae,dampiera,rugosum,native,habit,life\_form

celastraceae,podolepis,pygmaea,invasive,habit,life\_form

loganiaceae,podolepis,chlorocephala,invasive,habit,life\_form

primulaceae,podolepis,citrina,invasive,habit,annual

orchidaceae,podolepis,spicata,invasive,habit,life\_form

brassicaceae,podolepis,humboldtiana,invasive,habit,life\_form

brassicaceae,podolepis,laevis,invasive,habit,life\_form

compositae,podolepis,maryonii,invasive,forb,life\_form

compositae,podolepis,polycephala,invasive,habit,life\_form

compositae,podolepis,manglesii,invasive,habit,life\_form

compositae,podotheca,linearis,invasive,habit,life\_form

compositae,grevillea,rosea,native,habit,annual

compositae,silene,pumila,native,habit,life\_form

compositae,moraea,caespitosum,invasive,forb,annual

compositae,parietaria,spicatum,invasive,habit,life\_form

compositae,gilberta,cassiniana,invasive,forb,annual

compositae,lobelia,nanus,invasive,habit,annual

compositae,medicago,glossanthus,invasive,graminoid,annual

compositae,gonocarpus,sp,invasive,habit,life\_form

compositae,mesembryanthemum,nocturna,native,habit,life\_form

compositae,monoculus,oleraceus,native,habit,life\_form

compositae,quinetia,monogyna,invasive,habit,life\_form

compositae,ceratogyne,lineare,invasive,habit,life\_form

compositae,prasophyllum,manglesianus,invasive,habit,life\_form

compositae,prasophyllum,rectantherus,invasive,habit,life\_form

compositae,velleia,pilosa,invasive,habit,life\_form

compositae,velleia,cyanopetala,invasive,habit,life\_form

compositae,velleia,ornata,invasive,habit,life\_form

compositae,hordeum,subterraneum,native,habit,life\_form

ophioglossaceae,hordeum,hirtum,native,habit,life\_form

amaranthaceae,hordeum,glomeratum,native,twiner,annual

amaranthaceae,rhyncharrhena,isingiana,invasive,habit,life\_form

amaranthaceae,echium,picroides,native,habit,life\_form

centrolepidaceae,gnephosis,anthemoides,native,shrub,annual

polygonaceae,vulpia,rosea,invasive,forb,annual

colchicaceae,vulpia,cycnopotamica,invasive,habit,life\_form

urticaceae,juncus,bromoides,native,habit,life\_form

haloragaceae,juncus,myuros,native,forb,life\_form

phyllanthaceae,euphorbia,capensis,native,forb,life\_form

droseraceae,euphorbia,gracilenta,invasive,habit,life\_form

droseraceae,rhodanthe,acuminata,invasive,habit,life\_form

oxalidaceae,rhodanthe,nitida,invasive,forb,life\_form

stylidiaceae,menkea,drummondii,invasive,twiner,annual

boryaceae,menkea,spPaynes.Find,invasive,forb+cormous,annual

boryaceae,menkea,densiflora,invasive,forb,annual

boryaceae,arthropodium,divaricata,native,habit,life\_form

juncaginaceae,triglochin,iodocarpum,native,habit,life\_form

sqlite> .mode columns

sqlite> select family.family, genus.genus, species, invasive.invasive, habit.habit, life\_form.life\_form from species

...> join family on species.family = family.family\_id

...> join genus on species.genus = genus.genus\_id

...> join invasive on species.invasive = invasive.invasive\_id

...> join habit on species.habit = habit.habit\_id

...> join life\_form on species.life\_form = life\_form.life\_form\_id;

family genus species invasive habit life\_form

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zygophyllaceae pentameris uliginosum invasive habit life\_form

zygophyllaceae phyllangiu cupaniana native habit life\_form

crassulaceae zygophyllu tomentosus invasive habit life\_form

crassulaceae genus calendula native habit life\_form

crassulaceae actinobole contorta invasive forb life\_form

crassulaceae monachathe curvipes invasive habit life\_form

crassulaceae monachathe dyeri invasive habit life\_form

crassulaceae senecio sp invasive habit life\_form

crassulaceae arctotheca elegantiss invasive forb annual

crassulaceae arctotheca sp invasive forb life\_form

crassulaceae arctotheca sp3 invasive habit life\_form

crassulaceae arctotheca macalpinei invasive forb annual

aizoaceae caesia barbata native habit life\_form

asparagaceae caladenia graminea invasive forb annual

goodeniaceae ptilotus drummondii invasive habit life\_form

goodeniaceae trachymene sphaerocep invasive habit annual

goodeniaceae sonchus iberidifol invasive habit life\_form

goodeniaceae sonchus perpusilla invasive habit life\_form

pteridaceae sonchus ciliaris invasive habit life\_form

pteridaceae avena tournefort native habit life\_form

pteridaceae aira maxima native habit annual

pteridaceae austrostip rubens native forb life\_form

pteridaceae austrostip sp native forb life\_form

pteridaceae austrostip diandrus native forb annual

pteridaceae chamaescil australis invasive habit life\_form

scrophulariace brassica semibarbat invasive habit life\_form

araliaceae goodenia congesta invasive habit life\_form

xanthorrhoeace borya micrantha invasive forb life\_form

xanthorrhoeace chthonocep sp invasive forb annual

xanthorrhoeace chthonocep denticulat invasive twiner annual

xanthorrhoeace chthonocep roei invasive forb annual

xanthorrhoeace aristida corrigiolo invasive habit life\_form

xanthorrhoeace aristida granulifer invasive habit life\_form

euphorbiaceae aristida eremaea invasive habit life\_form

euphorbiaceae lepidium multifloru invasive forb+tuber annual

euphorbiaceae plantago hispidula invasive habit life\_form

plantaginaceae plantago multicauli invasive habit life\_form

plantaginaceae erymophyll annua native habit life\_form

plantaginaceae nicotiana drummondia invasive habit life\_form

cyperaceae nicotiana sp invasive habit life\_form

solanaceae nicotiana sp2 invasive habit life\_form

solanaceae nicotiana aristata invasive habit life\_form

solanaceae pogonolepi drummondii invasive habit life\_form

solanaceae schoenia obionoides invasive forb life\_form

leguminosae dianella versicolor invasive forb annual

leguminosae burchardia austrotenu invasive habit life\_form

leguminosae ophiogloss pseudevax invasive graminoid annual

leguminosae brunonia bipinnata native habit life\_form

family bromus colorata invasive habit life\_form

family bromus closiana invasive habit life\_form

family pheladenia amplexans invasive forb+tuber annual

family pheladenia gemmata invasive twiner annual

family levenhooki lavandulac invasive habit life\_form

family rostraria glochidiat invasive habit life\_form

family romulea revoluta invasive habit life\_form

family ursinia capillipes invasive habit life\_form

family pimelea erythrorhi invasive twiner annual

family pimelea glandulige invasive forb annual

family pimelea macrantha invasive graminoid annual

family zaluziansk plantagine native habit life\_form

family brachyscom longiflora native habit life\_form

family myriocepha australis native forb annual

family crassula tomentosa invasive graminoid annual

family calandrini aureum native habit life\_form

family calandrini botrys native habit life\_form

family calandrini cicutarium native graminoid annual

family calandrini cygnorum invasive habit life\_form

family urospermum ramosum invasive habit life\_form

family parentucel drummondii invasive habit life\_form

family haloragis tenuifolia invasive habit life\_form

family bellida osbornei invasive habit life\_form

family cheilanthe tenuissima invasive habit life\_form

family isoetopsis nodulosus invasive forb life\_form

family atriplex berardiana invasive habit life\_form

family atriplex occidental invasive habit life\_form

family atriplex pusilliflo invasive habit life\_form

family atriplex krauseana invasive habit life\_form

family emex paniculata invasive graminoid annual

family lamarckia odontocarp invasive habit life\_form

family briza rhagadiolo native habit life\_form

family cotula glomerosa invasive forb annual

family angianthus leporinum native habit life\_form

family erodium glutinosum invasive habit life\_form

family erodium demissum invasive habit life\_form

family erodium glutinosum invasive habit life\_form

family petrorhagi pilifera invasive habit life\_form

family enchylaena glabra native habit life\_form

family carrichter graminifol invasive habit life\_form

family hibbertia juncea invasive habit life\_form

family blennospor bufonius native forb life\_form

family daucus aurea native habit life\_form

family dichopogon rosea invasive forb life\_form

family dichopogon davenporti invasive habit life\_form

family cyanicula bonariense native twiner annual

family drosera dubia invasive habit life\_form

family drosera leptantha invasive habit life\_form

family rytidosper gibbosa invasive habit life\_form

family hypochaeri perenne native forb life\_form

family santalum effusa invasive habit life\_form

family centrolepi arvensis native forb life\_form

family hydrocotyl minima native habit life\_form

family hydrocotyl polymorpha native forb life\_form

poaceae gilruthia sphaerocar invasive forb annual

poaceae trifolium crystallin native habit life\_form

iridaceae trifolium nodiflorum native forb annual

proteaceae ehrharta myosotidif invasive habit life\_form

thymelaeaceae ehrharta tenuifolia invasive habit life\_form

thymelaeaceae stenopetal paradoxus invasive habit life\_form

thymelaeaceae bulbine monstrosus native habit life\_form

orobanchaceae wahlenberg flaccida native graminoid annual

portulacaceae wahlenberg setifolia native forb life\_form

portulacaceae wurmbea guerinae invasive habit life\_form

portulacaceae schoenus alopecuroi invasive habit life\_form

portulacaceae poranthera rotundifol invasive habit life\_form

juncaceae lomandra lusitanicu invasive habit life\_form

juncaceae lysimachia perennans invasive graminoid annual

juncaceae hedypnois latifolia native habit life\_form

juncaceae rapistrum cardiosteg invasive habit life\_form

juncaceae lolium airoides native forb life\_form

juncaceae calotis dubia native habit life\_form

juncaceae isotropis deformis invasive twiner annual

juncaceae sida sulcatum invasive habit life\_form

apiaceae oxalis imbricata invasive forb life\_form

apiaceae cephalipte coronopus native graminoid annual

campanulaceae cephalipte debilis invasive habit life\_form

campanulaceae hyalosperm capillaris invasive shrub life\_form

campanulaceae hyalosperm lessonii invasive habit life\_form

geraniaceae hyalosperm canescens invasive habit life\_form

apocynaceae lawrencell angustifol invasive habit annual

caryophyllacea lawrencell gnaphalioi invasive habit life\_form

caryophyllacea millotia muellerian invasive habit life\_form

caryophyllacea calocephal tetraphyll native twiner annual

caryophyllacea thysanotus microphyll invasive forb life\_form

caryophyllacea stackhousi gracile invasive habit life\_form

caryophyllacea waitzia polystachy invasive habit life\_form

malvaceae waitzia gaudichaud invasive habit life\_form

boraginaceae waitzia exaltatus invasive habit life\_form

santalaceae waitzia drummondii invasive habit life\_form

celastraceae waitzia spathulatu invasive habit life\_form

celastraceae waitzia declinatus invasive habit life\_form

celastraceae waitzia holoserice invasive habit life\_form

celastraceae waitzia sp invasive graminoid annual

celastraceae neurachne urvillei invasive forb life\_form

celastraceae dampiera rugosum native habit life\_form

celastraceae podolepis pygmaea invasive habit life\_form

loganiaceae podolepis chloroceph invasive habit life\_form

primulaceae podolepis citrina invasive habit annual

orchidaceae podolepis spicata invasive habit life\_form

brassicaceae podolepis humboldtia invasive habit life\_form

brassicaceae podolepis laevis invasive habit life\_form

compositae podolepis maryonii invasive forb life\_form

compositae podolepis polycephal invasive habit life\_form

compositae podolepis manglesii invasive habit life\_form

compositae podotheca linearis invasive habit life\_form

compositae grevillea rosea native habit annual

compositae silene pumila native habit life\_form

compositae moraea caespitosu invasive forb annual

compositae parietaria spicatum invasive habit life\_form

compositae gilberta cassiniana invasive forb annual

compositae lobelia nanus invasive habit annual

compositae medicago glossanthu invasive graminoid annual

compositae gonocarpus sp invasive habit life\_form

compositae mesembryan nocturna native habit life\_form

compositae monoculus oleraceus native habit life\_form

compositae quinetia monogyna invasive habit life\_form

compositae ceratogyne lineare invasive habit life\_form

compositae prasophyll manglesian invasive habit life\_form

compositae prasophyll rectanther invasive habit life\_form

compositae velleia pilosa invasive habit life\_form

compositae velleia cyanopetal invasive habit life\_form

compositae velleia ornata invasive habit life\_form

compositae hordeum subterrane native habit life\_form

ophioglossacea hordeum hirtum native habit life\_form

amaranthaceae hordeum glomeratum native twiner annual

amaranthaceae rhyncharrh isingiana invasive habit life\_form

amaranthaceae echium picroides native habit life\_form

centrolepidace gnephosis anthemoide native shrub annual

polygonaceae vulpia rosea invasive forb annual

colchicaceae vulpia cycnopotam invasive habit life\_form

urticaceae juncus bromoides native habit life\_form

haloragaceae juncus myuros native forb life\_form

phyllanthaceae euphorbia capensis native forb life\_form

droseraceae euphorbia gracilenta invasive habit life\_form

droseraceae rhodanthe acuminata invasive habit life\_form

oxalidaceae rhodanthe nitida invasive forb life\_form

stylidiaceae menkea drummondii invasive twiner annual

boryaceae menkea spPaynes.F invasive forb+cormo annual

boryaceae menkea densiflora invasive forb annual

boryaceae arthropodi divaricata native habit life\_form

juncaginaceae triglochin iodocarpum native habit life\_form

sqlite> DROP TABLE species;

sqlite> DROP TABLE family;

sqlite> DROP TABLE genus;

sqlite> DROP TABLE invasive;

sqlite> DROP TABLE habit;

sqlite> DROP TABLE life\_form;

sqlite> CREATE TABLE family (

...> family\_id integer PRIMARY KEY,

...> family text NOT NULL);

sqlite> .mode csv

sqlite> .import family.csv family

sqlite> select \* from family;

family\_id,family

1,compositae

2,poaceae

3,crassulaceae

4,amaranthaceae

5,portulacaceae

6,geraniaceae

7,juncaceae

8,goodeniaceae

9,araliaceae

10,boryaceae

11,xanthorrhoeaceae

12,brassicaceae

13,plantaginaceae

14,caryophyllaceae

15,leguminosae

16,colchicaceae

17,pteridaceae

18,asparagaceae

19,apocynaceae

20,juncaginaceae

21,zygophyllaceae

22,aizoaceae

23,apiaceae

24,haloragaceae

25,scrophulariaceae

26,boraginaceae

27,malvaceae

28,loganiaceae

29,orobanchaceae

30,euphorbiaceae

31,campanulaceae

32,iridaceae

33,cyperaceae

34,celastraceae

35,orchidaceae

36,phyllanthaceae

37,solanaceae

38,centrolepidaceae

39,primulaceae

40,oxalidaceae

41,thymelaeaceae

42,droseraceae

43,stylidiaceae

44,urticaceae

45,santalaceae

46,ophioglossaceae

47,polygonaceae

48,proteaceae

49,dilleniaceae

sqlite> CREATE TABLE genus (

...> genus\_id integer NOT NULL PRIMARY KEY,

...> genus text NOT NULL);

sqlite> .mode csv

sqlite> .import genus.csv genus

sqlite> select \* from genus;

genus\_id,genus

1,arctotheca

2,austrostipa

3,bromus

4,crassula

5,enchylaena

6,hypochaeris

7,lolium

8,pentameris

9,actinobole

10,aristida

11,calandrinia

12,erodium

13,hyalosperma

14,podolepis

15,rhodanthe

16,waitzia

17,ptilotus

18,blennospora

19,juncus

20,vulpia

21,velleia

22,trachymene

23,borya

24,caesia

25,avena

26,brassica

27,bulbine

28,monoculus

29,sonchus

30,brachyscome

31,ehrharta

32,millotia

33,pogonolepis

34,cephalipterum

35,plantago

36,calotis

37,petrorhagia

38,hydrocotyle

39,medicago

40,senecio

41,atriplex

42,goodenia

43,burchardia

44,cheilanthes

45,gnephosis

46,ursinia

47,dichopogon

48,lawrencella

49,podotheca

50,rhyncharrhena

51,triglochin

52,zygophyllum

53,angianthus

54,hordeum

55,trifolium

56,mesembryanthemum

57,silene

58,rostraria

59,daucus

60,lamarckia

61,haloragis

62,gilberta

63,schoenia

64,ceratogyne

65,stenopetalum

66,monachather

67,arthropodium

68,zaluzianskya

69,echium

70,urospermum

71,erymophyllum

72,carrichtera

73,isoetopsis

74,gonocarpus

75,sida

76,phyllangium

77,aira

78,briza

79,hedypnois

80,parentucellia

81,euphorbia

82,wahlenbergia

83,moraea

84,rytidosperma

85,lobelia

86,schoenus

87,neurachne

88,quinetia

89,stackhousia

90,prasophyllum

91,thysanotus

92,poranthera

93,nicotiana

94,centrolepis

95,lysimachia

96,oxalis

97,pimelea

98,drosera

99,levenhookia

100,dampiera

101,rapistrum

102,parietaria

103,santalum

104,lomandra

105,ophioglossum

106,chthonocephalus

107,caladenia

108,bellida

109,gilruthia

110,menkea

111,wurmbea

112,myriocephalus

113,emex

114,grevillea

115,romulea

116,dianella

117,chamaescilla

118,brunonia

119,cotula

120,hibbertia

121,isotropis

122,pheladenia

123,cyanicula

124,lepidium

125,calocephalus

126,polycarpon

sqlite> CREATE TABLE invasive (

...> invasive\_id integer NOT NULL PRIMARY KEY,

...> invasive NOT NULL);

sqlite>

sqlite> .mode csv

sqlite> .import invasive.csv invasive

sqlite> CREATE TABLE habit (

...> habit\_id integer NOT NULL PRIMARY KEY,

...> habit text NOT NULL);

sqlite>

sqlite>

sqlite> .mode csv

sqlite> .import habit.csv habit

sqlite> CREATE TABLE life\_form (

...> life\_form\_id integer NOT NULL PRIMARY KEY,

...> life\_form text NOT NULL);

sqlite>

sqlite>

sqlite> .mode csv

sqlite> .import life\_form.csv life\_form

sqlite> CREATE TABLE species (

...> species\_id integer PRIMARY KEY,

...> family integer NOT NULL REFERENCES family(family\_id),

...> genus integer NOT NULL REFERENCES genus(genus\_id),

...> species integer NOT NULL,

...> invasive integer REFERENCES invasive(invasive\_id),

...> habit integer REFERENCES habit(habit\_id),

...> life\_form integer REFERENCES life\_form(life\_form\_id));

sqlite>

sqlite>

sqlite> .mode csv

sqlite> .import species.csv species

sqlite> select family.family, genus.genus, species, invasive.invasive, habit.habit, life\_form.life\_form from species

...> join family on species.family = family.family\_id

...> join genus on species.genus = genus.genus\_id

...> join invasive on species.invasive = invasive.invasive\_id

...> join habit on species.habit = habit.habit\_id

...> join life\_form on species.life\_form = life\_form.life\_form\_id;

family,genus,species,invasive,habit,life\_form

aizoaceae,actinobole,uliginosum,native,forb,annual

aizoaceae,aira,cupaniana,exotic,forb,annual

amaranthaceae,angianthus,tomentosus,native,forb,annual

amaranthaceae,arctotheca,calendula,exotic,forb,annual

amaranthaceae,aristida,contorta,native,graminoid,annual

amaranthaceae,arthropodium,curvipes,native,forb,annual

amaranthaceae,arthropodium,dyeri,native,forb,annual

amaranthaceae,atriplex,sp,native,forb,annual

amaranthaceae,austrostipa,elegantissima,native,graminoid,perennial

amaranthaceae,austrostipa,sp,native,graminoid,annual

amaranthaceae,austrostipa,sp3,native,forb,annual

amaranthaceae,austrostipa,macalpinei,native,graminoid,perennial

apiaceae,avena,barbata,exotic,forb,annual

apocynaceae,bellida,graminea,native,graminoid,perennial

araliaceae,blennospora,drummondii,native,forb,annual

araliaceae,borya,sphaerocephala,native,forb,perennial

araliaceae,brachyscome,iberidifolia,native,forb,annual

araliaceae,brachyscome,perpusilla,native,forb,annual

asparagaceae,brachyscome,ciliaris,native,forb,annual

asparagaceae,brassica,tournefortii,exotic,forb,annual

asparagaceae,briza,maxima,exotic,forb,perennial

asparagaceae,bromus,rubens,exotic,graminoid,annual

asparagaceae,bromus,sp,exotic,graminoid,annual

asparagaceae,bromus,diandrus,exotic,graminoid,perennial

asparagaceae,brunonia,australis,native,forb,annual

boraginaceae,bulbine,semibarbata,native,forb,annual

boryaceae,burchardia,congesta,native,forb,annual

brassicaceae,caesia,micrantha,native,graminoid,annual

brassicaceae,caladenia,sp,native,graminoid,perennial

brassicaceae,caladenia,denticulata,native,forb+tuberous,perennial

brassicaceae,caladenia,roei,native,graminoid,perennial

brassicaceae,calandrinia,corrigioloides,native,forb,annual

brassicaceae,calandrinia,granulifera,native,forb,annual

campanulaceae,calandrinia,eremaea,native,forb,annual

campanulaceae,calocephalus,multiflorus,native,forb+cormous,perennial

campanulaceae,calotis,hispidula,native,forb,annual

caryophyllaceae,calotis,multicaulis,native,forb,annual

caryophyllaceae,carrichtera,annua,exotic,forb,annual

caryophyllaceae,centrolepis,drummondiana,native,forb,annual

celastraceae,centrolepis,sp,native,forb,annual

centrolepidaceae,centrolepis,sp2,native,forb,annual

centrolepidaceae,centrolepis,aristata,native,forb,annual

centrolepidaceae,cephalipterum,drummondii,native,forb,annual

centrolepidaceae,ceratogyne,obionoides,native,graminoid,annual

colchicaceae,chamaescilla,versicolor,native,graminoid,perennial

colchicaceae,cheilanthes,austrotenuifolia,native,forb,annual

colchicaceae,chthonocephalus,pseudevax,native,shrub,perennial

colchicaceae,cotula,bipinnata,exotic,forb,annual

compositae,crassula,colorata,native,forb,annual

compositae,crassula,closiana,native,forb,annual

compositae,cyanicula,amplexans,native,forb+cormous,perennial

compositae,cyanicula,gemmata,native,forb+tuberous,perennial

compositae,dampiera,lavandulacea,native,forb,annual

compositae,daucus,glochidiatus,native,forb,annual

compositae,dianella,revoluta,native,forb,annual

compositae,dichopogon,capillipes,native,forb,annual

compositae,drosera,erythrorhiza,native,forb+tuberous,perennial

compositae,drosera,glanduligera,native,graminoid,perennial

compositae,drosera,macrantha,native,shrub,perennial

compositae,echium,plantagineum,exotic,forb,annual

compositae,ehrharta,longiflora,exotic,forb,annual

compositae,emex,australis,exotic,graminoid,perennial

compositae,enchylaena,tomentosa,native,shrub,perennial

compositae,erodium,aureum,exotic,forb,annual

compositae,erodium,botrys,exotic,forb,annual

compositae,erodium,cicutarium,exotic,shrub,perennial

compositae,erodium,cygnorum,native,forb,annual

compositae,erymophyllum,ramosum,native,forb,annual

compositae,euphorbia,drummondii,native,forb,annual

compositae,gilberta,tenuifolia,native,forb,annual

compositae,gilruthia,osbornei,native,forb,annual

compositae,gnephosis,tenuissima,native,forb,annual

compositae,gonocarpus,nodulosus,native,graminoid,annual

compositae,goodenia,berardiana,native,forb,annual

compositae,goodenia,occidentalis,native,forb,annual

compositae,goodenia,pusilliflora,native,forb,annual

compositae,goodenia,krauseana,native,forb,annual

compositae,grevillea,paniculata,native,shrub,perennial

compositae,haloragis,odontocarpa,native,forb,annual

compositae,hedypnois,rhagadioloides,exotic,forb,annual

compositae,hibbertia,glomerosa,native,graminoid,perennial

compositae,hordeum,leporinum,exotic,forb,annual

compositae,hyalosperma,glutinosum.subsp.glutinosum,native,forb,annual

compositae,hyalosperma,demissum,native,forb,annual

compositae,hyalosperma,glutinosum.subsp.venustum,native,forb,annual

compositae,hydrocotyle,pilifera,native,forb,annual

compositae,hypochaeris,glabra,exotic,forb,annual

compositae,isoetopsis,graminifolia,native,forb,annual

compositae,isotropis,juncea,native,forb,annual

compositae,juncus,bufonius,exotic,graminoid,annual

compositae,lamarckia,aurea,exotic,forb,annual

compositae,lawrencella,rosea,native,graminoid,annual

compositae,lawrencella,davenportii,native,forb,annual

compositae,lepidium,bonariense,exotic,forb+tuberous,perennial

compositae,levenhookia,dubia,native,forb,annual

compositae,levenhookia,leptantha,native,forb,annual

compositae,lobelia,gibbosa,native,forb,annual

compositae,lolium,perenne,exotic,graminoid,annual

compositae,lomandra,effusa,native,forb,annual

compositae,lysimachia,arvensis,exotic,graminoid,annual

compositae,medicago,minima,exotic,forb,annual

compositae,medicago,polymorpha,exotic,graminoid,annual

crassulaceae,menkea,sphaerocarpa,native,graminoid,perennial

crassulaceae,mesembryanthemum,crystallinum,exotic,forb,annual

cyperaceae,mesembryanthemum,nodiflorum,exotic,graminoid,perennial

dilleniaceae,millotia,myosotidifolia,native,forb,annual

droseraceae,millotia,tenuifolia,native,forb,annual

droseraceae,monachather,paradoxus,native,forb,annual

droseraceae,monoculus,monstrosus,exotic,forb,annual

euphorbiaceae,moraea,flaccida,exotic,shrub,perennial

geraniaceae,moraea,setifolia,exotic,graminoid,annual

geraniaceae,myriocephalus,guerinae,native,forb,annual

geraniaceae,neurachne,alopecuroidea,native,forb,annual

geraniaceae,nicotiana,rotundifolia,native,forb,annual

goodeniaceae,ophioglossum,lusitanicum,native,forb,annual

goodeniaceae,oxalis,perennans,native,shrub,perennial

goodeniaceae,parentucellia,latifolia,exotic,forb,annual

goodeniaceae,parietaria,cardiostegia,native,forb,annual

goodeniaceae,pentameris,airoides,exotic,graminoid,annual

goodeniaceae,petrorhagia,dubia,exotic,forb,annual

goodeniaceae,pheladenia,deformis,native,forb+tuberous,perennial

goodeniaceae,phyllangium,sulcatum,native,forb,annual

haloragaceae,pimelea,imbricata,native,graminoid,annual

haloragaceae,plantago,coronopus,exotic,shrub,perennial

iridaceae,plantago,debilis,native,forb,annual

iridaceae,podolepis,capillaris,native,twiner,annual

iridaceae,podolepis,lessonii,native,forb,annual

juncaceae,podolepis,canescens,native,forb,annual

juncaginaceae,podotheca,angustifolia,native,forb,perennial

leguminosae,podotheca,gnaphalioides,native,forb,annual

leguminosae,pogonolepis,muelleriana,native,forb,annual

leguminosae,polycarpon,tetraphyllum,exotic,forb+tuberous,perennial

leguminosae,poranthera,microphylla,native,graminoid,annual

leguminosae,prasophyllum,gracile,native,forb,annual

leguminosae,ptilotus,polystachyus,native,forb,annual

loganiaceae,ptilotus,gaudichaudii,native,forb,annual

malvaceae,ptilotus,exaltatus,native,forb,annual

ophioglossaceae,ptilotus,drummondii,native,forb,annual

orchidaceae,ptilotus,spathulatus,native,forb,annual

orchidaceae,ptilotus,declinatus,native,forb,annual

orchidaceae,ptilotus,holosericeus,native,forb,annual

orchidaceae,ptilotus,sp,native,shrub,perennial

orchidaceae,quinetia,urvillei,native,graminoid,annual

orchidaceae,rapistrum,rugosum,exotic,forb,annual

orchidaceae,rhodanthe,pygmaea,native,forb,annual

orobanchaceae,rhodanthe,chlorocephala,native,forb,annual

oxalidaceae,rhodanthe,citrina,native,forb,perennial

phyllanthaceae,rhodanthe,spicata,native,forb,annual

plantaginaceae,rhodanthe,humboldtiana,native,forb,annual

plantaginaceae,rhodanthe,laevis,native,forb,annual

poaceae,rhodanthe,maryonii,native,graminoid,annual

poaceae,rhodanthe,polycephala,native,forb,annual

poaceae,rhodanthe,manglesii,native,forb,annual

poaceae,rhyncharrhena,linearis,native,forb,annual

poaceae,romulea,rosea,exotic,forb,perennial

poaceae,rostraria,pumila,exotic,forb,annual

poaceae,rytidosperma,caespitosum,native,graminoid,perennial

poaceae,santalum,spicatum,native,forb,annual

poaceae,schoenia,cassiniana,native,graminoid,perennial

poaceae,schoenus,nanus,native,forb,perennial

poaceae,senecio,glossanthus,native,shrub,perennial

poaceae,sida,sp,native,forb,annual

poaceae,silene,nocturna,exotic,forb,annual

poaceae,sonchus,oleraceus,exotic,forb,annual

poaceae,stackhousia,monogyna,native,forb,annual

poaceae,stenopetalum,lineare,native,forb,annual

poaceae,thysanotus,manglesianus,native,forb,annual

poaceae,thysanotus,rectantherus,native,forb,annual

poaceae,trachymene,pilosa,native,forb,annual

poaceae,trachymene,cyanopetala,native,forb,annual

poaceae,trachymene,ornata,native,forb,annual

poaceae,trifolium,subterraneum,exotic,forb,annual

polygonaceae,trifolium,hirtum,exotic,forb,annual

portulacaceae,trifolium,glomeratum,exotic,forb+tuberous,perennial

portulacaceae,triglochin,isingiana,native,forb,annual

portulacaceae,urospermum,picroides,exotic,forb,annual

primulaceae,ursinia,anthemoides,exotic,twiner,perennial

proteaceae,velleia,rosea,native,graminoid,perennial

pteridaceae,velleia,cycnopotamica,native,forb,annual

santalaceae,vulpia,bromoides,exotic,forb,annual

scrophulariaceae,vulpia,myuros,exotic,graminoid,annual

solanaceae,wahlenbergia,capensis,exotic,graminoid,annual

stylidiaceae,wahlenbergia,gracilenta,native,forb,annual

stylidiaceae,waitzia,acuminata,native,forb,annual

thymelaeaceae,waitzia,nitida,native,graminoid,annual

urticaceae,wurmbea,drummondii,native,forb+tuberous,perennial

xanthorrhoeaceae,wurmbea,spPaynes.Find,native,forb+rhizomatous,perennial

xanthorrhoeaceae,wurmbea,densiflora,native,graminoid,perennial

xanthorrhoeaceae,zaluzianskya,divaricata,exotic,forb,annual

zygophyllaceae,zygophyllum,iodocarpum,exotic,forb,annual

sqlite> .mode columns

sqlite> select family.family, genus.genus, species, invasive.invasive, habit.habit, life\_form.life\_form from species

...> join family on species.family = family.family\_id

...> join genus on species.genus = genus.genus\_id

...> join invasive on species.invasive = invasive.invasive\_id

...> join habit on species.habit = habit.habit\_id

...> join life\_form on species.life\_form = life\_form.life\_form\_id;

family genus species invasive habit life\_form

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aizoaceae actinobole uliginosum native forb annual

aizoaceae aira cupaniana exotic forb annual

amaranthac angianthus tomentosus native forb annual

amaranthac arctotheca calendula exotic forb annual

amaranthac aristida contorta native graminoid annual

amaranthac arthropodi curvipes native forb annual

amaranthac arthropodi dyeri native forb annual

amaranthac atriplex sp native forb annual

amaranthac austrostip elegantiss native graminoid perennial

amaranthac austrostip sp native graminoid annual

amaranthac austrostip sp3 native forb annual

amaranthac austrostip macalpinei native graminoid perennial

apiaceae avena barbata exotic forb annual

apocynacea bellida graminea native graminoid perennial

araliaceae blennospor drummondii native forb annual

araliaceae borya sphaerocep native forb perennial

araliaceae brachyscom iberidifol native forb annual

araliaceae brachyscom perpusilla native forb annual

asparagace brachyscom ciliaris native forb annual

asparagace brassica tournefort exotic forb annual

asparagace briza maxima exotic forb perennial

asparagace bromus rubens exotic graminoid annual

asparagace bromus sp exotic graminoid annual

asparagace bromus diandrus exotic graminoid perennial

asparagace brunonia australis native forb annual

boraginace bulbine semibarbat native forb annual

boryaceae burchardia congesta native forb annual

brassicace caesia micrantha native graminoid annual

brassicace caladenia sp native graminoid perennial

brassicace caladenia denticulat native forb+tuber perennial

brassicace caladenia roei native graminoid perennial

brassicace calandrini corrigiolo native forb annual

brassicace calandrini granulifer native forb annual

campanulac calandrini eremaea native forb annual

campanulac calocephal multifloru native forb+cormo perennial

campanulac calotis hispidula native forb annual

caryophyll calotis multicauli native forb annual

caryophyll carrichter annua exotic forb annual

caryophyll centrolepi drummondia native forb annual

celastrace centrolepi sp native forb annual

centrolepi centrolepi sp2 native forb annual

centrolepi centrolepi aristata native forb annual

centrolepi cephalipte drummondii native forb annual

centrolepi ceratogyne obionoides native graminoid annual

colchicace chamaescil versicolor native graminoid perennial

colchicace cheilanthe austrotenu native forb annual

colchicace chthonocep pseudevax native shrub perennial

colchicace cotula bipinnata exotic forb annual

compositae crassula colorata native forb annual

compositae crassula closiana native forb annual

compositae cyanicula amplexans native forb+cormo perennial

compositae cyanicula gemmata native forb+tuber perennial

compositae dampiera lavandulac native forb annual

compositae daucus glochidiat native forb annual

compositae dianella revoluta native forb annual

compositae dichopogon capillipes native forb annual

compositae drosera erythrorhi native forb+tuber perennial

compositae drosera glandulige native graminoid perennial

compositae drosera macrantha native shrub perennial

compositae echium plantagine exotic forb annual

compositae ehrharta longiflora exotic forb annual

compositae emex australis exotic graminoid perennial

compositae enchylaena tomentosa native shrub perennial

compositae erodium aureum exotic forb annual

compositae erodium botrys exotic forb annual

compositae erodium cicutarium exotic shrub perennial

compositae erodium cygnorum native forb annual

compositae erymophyll ramosum native forb annual

compositae euphorbia drummondii native forb annual

compositae gilberta tenuifolia native forb annual

compositae gilruthia osbornei native forb annual

compositae gnephosis tenuissima native forb annual

compositae gonocarpus nodulosus native graminoid annual

compositae goodenia berardiana native forb annual

compositae goodenia occidental native forb annual

compositae goodenia pusilliflo native forb annual

compositae goodenia krauseana native forb annual

compositae grevillea paniculata native shrub perennial

compositae haloragis odontocarp native forb annual

compositae hedypnois rhagadiolo exotic forb annual

compositae hibbertia glomerosa native graminoid perennial

compositae hordeum leporinum exotic forb annual

compositae hyalosperm glutinosum native forb annual

compositae hyalosperm demissum native forb annual

compositae hyalosperm glutinosum native forb annual

compositae hydrocotyl pilifera native forb annual

compositae hypochaeri glabra exotic forb annual

compositae isoetopsis graminifol native forb annual

compositae isotropis juncea native forb annual

compositae juncus bufonius exotic graminoid annual

compositae lamarckia aurea exotic forb annual

compositae lawrencell rosea native graminoid annual

compositae lawrencell davenporti native forb annual

compositae lepidium bonariense exotic forb+tuber perennial

compositae levenhooki dubia native forb annual

compositae levenhooki leptantha native forb annual

compositae lobelia gibbosa native forb annual

compositae lolium perenne exotic graminoid annual

compositae lomandra effusa native forb annual

compositae lysimachia arvensis exotic graminoid annual

compositae medicago minima exotic forb annual

compositae medicago polymorpha exotic graminoid annual

crassulace menkea sphaerocar native graminoid perennial

crassulace mesembryan crystallin exotic forb annual

cyperaceae mesembryan nodiflorum exotic graminoid perennial

dilleniace millotia myosotidif native forb annual

droseracea millotia tenuifolia native forb annual

droseracea monachathe paradoxus native forb annual

droseracea monoculus monstrosus exotic forb annual

euphorbiac moraea flaccida exotic shrub perennial

geraniacea moraea setifolia exotic graminoid annual

geraniacea myriocepha guerinae native forb annual

geraniacea neurachne alopecuroi native forb annual

geraniacea nicotiana rotundifol native forb annual

goodeniace ophiogloss lusitanicu native forb annual

goodeniace oxalis perennans native shrub perennial

goodeniace parentucel latifolia exotic forb annual

goodeniace parietaria cardiosteg native forb annual

goodeniace pentameris airoides exotic graminoid annual

goodeniace petrorhagi dubia exotic forb annual

goodeniace pheladenia deformis native forb+tuber perennial

goodeniace phyllangiu sulcatum native forb annual

haloragace pimelea imbricata native graminoid annual

haloragace plantago coronopus exotic shrub perennial

iridaceae plantago debilis native forb annual

iridaceae podolepis capillaris native twiner annual

iridaceae podolepis lessonii native forb annual

juncaceae podolepis canescens native forb annual

juncaginac podotheca angustifol native forb perennial

leguminosa podotheca gnaphalioi native forb annual

leguminosa pogonolepi muellerian native forb annual

leguminosa polycarpon tetraphyll exotic forb+tuber perennial

leguminosa poranthera microphyll native graminoid annual

leguminosa prasophyll gracile native forb annual

leguminosa ptilotus polystachy native forb annual

loganiacea ptilotus gaudichaud native forb annual

malvaceae ptilotus exaltatus native forb annual

ophiogloss ptilotus drummondii native forb annual

orchidacea ptilotus spathulatu native forb annual

orchidacea ptilotus declinatus native forb annual

orchidacea ptilotus holoserice native forb annual

orchidacea ptilotus sp native shrub perennial

orchidacea quinetia urvillei native graminoid annual

orchidacea rapistrum rugosum exotic forb annual

orchidacea rhodanthe pygmaea native forb annual

orobanchac rhodanthe chloroceph native forb annual

oxalidacea rhodanthe citrina native forb perennial

phyllantha rhodanthe spicata native forb annual

plantagina rhodanthe humboldtia native forb annual

plantagina rhodanthe laevis native forb annual

poaceae rhodanthe maryonii native graminoid annual

poaceae rhodanthe polycephal native forb annual

poaceae rhodanthe manglesii native forb annual

poaceae rhyncharrh linearis native forb annual

poaceae romulea rosea exotic forb perennial

poaceae rostraria pumila exotic forb annual

poaceae rytidosper caespitosu native graminoid perennial

poaceae santalum spicatum native forb annual

poaceae schoenia cassiniana native graminoid perennial

poaceae schoenus nanus native forb perennial

poaceae senecio glossanthu native shrub perennial

poaceae sida sp native forb annual

poaceae silene nocturna exotic forb annual

poaceae sonchus oleraceus exotic forb annual

poaceae stackhousi monogyna native forb annual

poaceae stenopetal lineare native forb annual

poaceae thysanotus manglesian native forb annual

poaceae thysanotus rectanther native forb annual

poaceae trachymene pilosa native forb annual

poaceae trachymene cyanopetal native forb annual

poaceae trachymene ornata native forb annual

poaceae trifolium subterrane exotic forb annual

polygonace trifolium hirtum exotic forb annual

portulacac trifolium glomeratum exotic forb+tuber perennial

portulacac triglochin isingiana native forb annual

portulacac urospermum picroides exotic forb annual

primulacea ursinia anthemoide exotic twiner perennial

proteaceae velleia rosea native graminoid perennial

pteridacea velleia cycnopotam native forb annual

santalacea vulpia bromoides exotic forb annual

scrophular vulpia myuros exotic graminoid annual

solanaceae wahlenberg capensis exotic graminoid annual

stylidiace wahlenberg gracilenta native forb annual

stylidiace waitzia acuminata native forb annual

thymelaeac waitzia nitida native graminoid annual

urticaceae wurmbea drummondii native forb+tuber perennial

xanthorrho wurmbea spPaynes.F native forb+rhizo perennial

xanthorrho wurmbea densiflora native graminoid perennial

xanthorrho zaluziansk divaricata exotic forb annual

zygophylla zygophyllu iodocarpum exotic forb annual

sqlite> SELECT f.family, g.genus, s.species, i.invasive, h.habit, lf.life\_form

...> FROM family f, genus g, species s, invasive i, habit h, life\_form lf

...> WHERE s.family = f.family\_id

...> genus = s.genus = g.genus\_id

...> invasive = s.invasive = i.invasive\_id

...> habit = s.habit = h.habit\_id

...> life\_form = s.life\_form = lf.life\_form\_id;

Error: near "genus": syntax error

sqlite> select \* from species limit 5;

species\_id family genus species invasive habit life\_form

---------- ---------- ---------- ---------- ---------- ---------- ----------

1 22 9 uliginosum 1 1 1

2 22 77 cupaniana 2 1 1

3 4 53 tomentosus 1 1 1

4 4 1 calendula 2 1 1

5 4 10 contorta 1 2 1

sqlite> SELECT family.family, genus.genus, species.species, invasive.invasive, habit.habit, life\_form.life\_form

...> FROM family, genus, species, invasive, habit, life\_form

...> WHERE species.family = family.family\_id

...> genus = species.genus = genus.genus\_id

...> invasive = species.invasive = invasive.invasive\_id

...> habit = species.habit = habit.habit\_id

...> life\_form = species.life\_form = life\_form.life\_form\_id;

Error: near "genus": syntax error

sqlite> select family, genus, species, invasive, habit, life\_form from species

...> join family on species.family = family.family\_id

...> join genus on species.genus = genus.genus\_id

...> join invasive on species.invasive = invasive.invasive\_id

...> join habit on species.habit = habit.habit\_id

...> join life\_form on species.life\_form = life\_form.life\_form\_id;

Error: ambiguous column name: family

sqlite> SELECT family.family, genus.genus, species.species, invasive.invasive, habit.habit, life\_form.life\_form

...> FROM family, genus, species, invasive, habit, life\_form

...> WHERE species.family = family.family\_id

...> species.genus = genus.genus\_id

...> species.invasive = invasive.invasive\_id

...> species.habit = habit.habit\_id

...> species.life\_form = life\_form.life\_form\_id;

Error: near "species": syntax error

sqlite> SELECT family.family, genus.genus, species.species, invasive.invasive, habit.habit, life\_form.life\_form

...> FROM family, genus, species, invasive, habit, life\_form

...> WHERE species.family = family.family\_id,

...> species.genus = genus.genus\_id,

...> species.invasive = invasive.invasive\_id,

...> species.habit = habit.habit\_id,

...> species.life\_form = life\_form.life\_form\_id;

Error: near ",": syntax error

sqlite> SELECT family.family, genus.genus, species.species, invasive.invasive, habit.habit, life\_form.life\_form

...> FROM family, genus, species, invasive, habit, life\_form

...> WHERE species.family = family.family\_id

...> AND species.genus = genus.genus\_id

...> AND species.invasive = invasive.invasive\_id

...> AND species.habit = habit.habit\_id

...> AND species.life\_form = life\_form.life\_form\_id;

family genus species invasive habit life\_form

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aizoaceae actinobole uliginosum native forb annual

aizoaceae aira cupaniana exotic forb annual

amaranthac angianthus tomentosus native forb annual

amaranthac arctotheca calendula exotic forb annual

amaranthac aristida contorta native graminoid annual

amaranthac arthropodi curvipes native forb annual

amaranthac arthropodi dyeri native forb annual

amaranthac atriplex sp native forb annual

amaranthac austrostip elegantiss native graminoid perennial

amaranthac austrostip sp native graminoid annual

amaranthac austrostip sp3 native forb annual

amaranthac austrostip macalpinei native graminoid perennial

apiaceae avena barbata exotic forb annual

apocynacea bellida graminea native graminoid perennial

araliaceae blennospor drummondii native forb annual

araliaceae borya sphaerocep native forb perennial

araliaceae brachyscom iberidifol native forb annual

araliaceae brachyscom perpusilla native forb annual

asparagace brachyscom ciliaris native forb annual

asparagace brassica tournefort exotic forb annual

asparagace briza maxima exotic forb perennial

asparagace bromus rubens exotic graminoid annual

asparagace bromus sp exotic graminoid annual

asparagace bromus diandrus exotic graminoid perennial

asparagace brunonia australis native forb annual

boraginace bulbine semibarbat native forb annual

boryaceae burchardia congesta native forb annual

brassicace caesia micrantha native graminoid annual

brassicace caladenia sp native graminoid perennial

brassicace caladenia denticulat native forb+tuber perennial

brassicace caladenia roei native graminoid perennial

brassicace calandrini corrigiolo native forb annual

brassicace calandrini granulifer native forb annual

campanulac calandrini eremaea native forb annual

campanulac calocephal multifloru native forb+cormo perennial

campanulac calotis hispidula native forb annual

caryophyll calotis multicauli native forb annual

caryophyll carrichter annua exotic forb annual

caryophyll centrolepi drummondia native forb annual

celastrace centrolepi sp native forb annual

centrolepi centrolepi sp2 native forb annual

centrolepi centrolepi aristata native forb annual

centrolepi cephalipte drummondii native forb annual

centrolepi ceratogyne obionoides native graminoid annual

colchicace chamaescil versicolor native graminoid perennial

colchicace cheilanthe austrotenu native forb annual

colchicace chthonocep pseudevax native shrub perennial

colchicace cotula bipinnata exotic forb annual

compositae crassula colorata native forb annual

compositae crassula closiana native forb annual

compositae cyanicula amplexans native forb+cormo perennial

compositae cyanicula gemmata native forb+tuber perennial

compositae dampiera lavandulac native forb annual

compositae daucus glochidiat native forb annual

compositae dianella revoluta native forb annual

compositae dichopogon capillipes native forb annual

compositae drosera erythrorhi native forb+tuber perennial

compositae drosera glandulige native graminoid perennial

compositae drosera macrantha native shrub perennial

compositae echium plantagine exotic forb annual

compositae ehrharta longiflora exotic forb annual

compositae emex australis exotic graminoid perennial

compositae enchylaena tomentosa native shrub perennial

compositae erodium aureum exotic forb annual

compositae erodium botrys exotic forb annual

compositae erodium cicutarium exotic shrub perennial

compositae erodium cygnorum native forb annual

compositae erymophyll ramosum native forb annual

compositae euphorbia drummondii native forb annual

compositae gilberta tenuifolia native forb annual

compositae gilruthia osbornei native forb annual

compositae gnephosis tenuissima native forb annual

compositae gonocarpus nodulosus native graminoid annual

compositae goodenia berardiana native forb annual

compositae goodenia occidental native forb annual

compositae goodenia pusilliflo native forb annual

compositae goodenia krauseana native forb annual

compositae grevillea paniculata native shrub perennial

compositae haloragis odontocarp native forb annual

compositae hedypnois rhagadiolo exotic forb annual

compositae hibbertia glomerosa native graminoid perennial

compositae hordeum leporinum exotic forb annual

compositae hyalosperm glutinosum native forb annual

compositae hyalosperm demissum native forb annual

compositae hyalosperm glutinosum native forb annual

compositae hydrocotyl pilifera native forb annual

compositae hypochaeri glabra exotic forb annual

compositae isoetopsis graminifol native forb annual

compositae isotropis juncea native forb annual

compositae juncus bufonius exotic graminoid annual

compositae lamarckia aurea exotic forb annual

compositae lawrencell rosea native graminoid annual

compositae lawrencell davenporti native forb annual

compositae lepidium bonariense exotic forb+tuber perennial

compositae levenhooki dubia native forb annual

compositae levenhooki leptantha native forb annual

compositae lobelia gibbosa native forb annual

compositae lolium perenne exotic graminoid annual

compositae lomandra effusa native forb annual

compositae lysimachia arvensis exotic graminoid annual

compositae medicago minima exotic forb annual

compositae medicago polymorpha exotic graminoid annual

crassulace menkea sphaerocar native graminoid perennial

crassulace mesembryan crystallin exotic forb annual

cyperaceae mesembryan nodiflorum exotic graminoid perennial

dilleniace millotia myosotidif native forb annual

droseracea millotia tenuifolia native forb annual

droseracea monachathe paradoxus native forb annual

droseracea monoculus monstrosus exotic forb annual

euphorbiac moraea flaccida exotic shrub perennial

geraniacea moraea setifolia exotic graminoid annual

geraniacea myriocepha guerinae native forb annual

geraniacea neurachne alopecuroi native forb annual

geraniacea nicotiana rotundifol native forb annual

goodeniace ophiogloss lusitanicu native forb annual

goodeniace oxalis perennans native shrub perennial

goodeniace parentucel latifolia exotic forb annual

goodeniace parietaria cardiosteg native forb annual

goodeniace pentameris airoides exotic graminoid annual

goodeniace petrorhagi dubia exotic forb annual

goodeniace pheladenia deformis native forb+tuber perennial

goodeniace phyllangiu sulcatum native forb annual

haloragace pimelea imbricata native graminoid annual

haloragace plantago coronopus exotic shrub perennial

iridaceae plantago debilis native forb annual

iridaceae podolepis capillaris native twiner annual

iridaceae podolepis lessonii native forb annual

juncaceae podolepis canescens native forb annual

juncaginac podotheca angustifol native forb perennial

leguminosa podotheca gnaphalioi native forb annual

leguminosa pogonolepi muellerian native forb annual

leguminosa polycarpon tetraphyll exotic forb+tuber perennial

leguminosa poranthera microphyll native graminoid annual

leguminosa prasophyll gracile native forb annual

leguminosa ptilotus polystachy native forb annual

loganiacea ptilotus gaudichaud native forb annual

malvaceae ptilotus exaltatus native forb annual

ophiogloss ptilotus drummondii native forb annual

orchidacea ptilotus spathulatu native forb annual

orchidacea ptilotus declinatus native forb annual

orchidacea ptilotus holoserice native forb annual

orchidacea ptilotus sp native shrub perennial

orchidacea quinetia urvillei native graminoid annual

orchidacea rapistrum rugosum exotic forb annual

orchidacea rhodanthe pygmaea native forb annual

orobanchac rhodanthe chloroceph native forb annual

oxalidacea rhodanthe citrina native forb perennial

phyllantha rhodanthe spicata native forb annual

plantagina rhodanthe humboldtia native forb annual

plantagina rhodanthe laevis native forb annual

poaceae rhodanthe maryonii native graminoid annual

poaceae rhodanthe polycephal native forb annual

poaceae rhodanthe manglesii native forb annual

poaceae rhyncharrh linearis native forb annual

poaceae romulea rosea exotic forb perennial

poaceae rostraria pumila exotic forb annual

poaceae rytidosper caespitosu native graminoid perennial

poaceae santalum spicatum native forb annual

poaceae schoenia cassiniana native graminoid perennial

poaceae schoenus nanus native forb perennial

poaceae senecio glossanthu native shrub perennial

poaceae sida sp native forb annual

poaceae silene nocturna exotic forb annual

poaceae sonchus oleraceus exotic forb annual

poaceae stackhousi monogyna native forb annual

poaceae stenopetal lineare native forb annual

poaceae thysanotus manglesian native forb annual

poaceae thysanotus rectanther native forb annual

poaceae trachymene pilosa native forb annual

poaceae trachymene cyanopetal native forb annual

poaceae trachymene ornata native forb annual

poaceae trifolium subterrane exotic forb annual

polygonace trifolium hirtum exotic forb annual

portulacac trifolium glomeratum exotic forb+tuber perennial

portulacac triglochin isingiana native forb annual

portulacac urospermum picroides exotic forb annual

primulacea ursinia anthemoide exotic twiner perennial

proteaceae velleia rosea native graminoid perennial

pteridacea velleia cycnopotam native forb annual

santalacea vulpia bromoides exotic forb annual

scrophular vulpia myuros exotic graminoid annual

solanaceae wahlenberg capensis exotic graminoid annual

stylidiace wahlenberg gracilenta native forb annual

stylidiace waitzia acuminata native forb annual

thymelaeac waitzia nitida native graminoid annual

urticaceae wurmbea drummondii native forb+tuber perennial

xanthorrho wurmbea spPaynes.F native forb+rhizo perennial

xanthorrho wurmbea densiflora native graminoid perennial

xanthorrho zaluziansk divaricata exotic forb annual

zygophylla zygophyllu iodocarpum exotic forb annual

sqlite> select \* from genus;

genus\_id genus

---------- ----------

1 arctotheca

2 austrostip

3 bromus

4 crassula

5 enchylaena

6 hypochaeri

7 lolium

8 pentameris

9 actinobole

10 aristida

11 calandrini

12 erodium

13 hyalosperm

14 podolepis

15 rhodanthe

16 waitzia

17 ptilotus

18 blennospor

19 juncus

20 vulpia

21 velleia

22 trachymene

23 borya

24 caesia

25 avena

26 brassica

27 bulbine

28 monoculus

29 sonchus

30 brachyscom

31 ehrharta

32 millotia

33 pogonolepi

34 cephalipte

35 plantago

36 calotis

37 petrorhagi

38 hydrocotyl

39 medicago

40 senecio

41 atriplex

42 goodenia

43 burchardia

44 cheilanthe

45 gnephosis

46 ursinia

47 dichopogon

48 lawrencell

49 podotheca

50 rhyncharrh

51 triglochin

52 zygophyllu

53 angianthus

54 hordeum

55 trifolium

56 mesembryan

57 silene

58 rostraria

59 daucus

60 lamarckia

61 haloragis

62 gilberta

63 schoenia

64 ceratogyne

65 stenopetal

66 monachathe

67 arthropodi

68 zaluziansk

69 echium

70 urospermum

71 erymophyll

72 carrichter

73 isoetopsis

74 gonocarpus

75 sida

76 phyllangiu

77 aira

78 briza

79 hedypnois

80 parentucel

81 euphorbia

82 wahlenberg

83 moraea

84 rytidosper

85 lobelia

86 schoenus

87 neurachne

88 quinetia

89 stackhousi

90 prasophyll

91 thysanotus

92 poranthera

93 nicotiana

94 centrolepi

95 lysimachia

96 oxalis

97 pimelea

98 drosera

99 levenhooki

100 dampiera

101 rapistrum

102 parietaria

103 santalum

104 lomandra

105 ophiogloss

106 chthonocep

107 caladenia

108 bellida

109 gilruthia

110 menkea

111 wurmbea

112 myriocepha

113 emex

114 grevillea

115 romulea

116 dianella

117 chamaescil

118 brunonia

119 cotula

120 hibbertia

121 isotropis

122 pheladenia

123 cyanicula

124 lepidium

125 calocephal

126 polycarpon

sqlite> select \* from family;

family\_id family

---------- ----------

1 compositae

2 poaceae

3 crassulace

4 amaranthac

5 portulacac

6 geraniacea

7 juncaceae

8 goodeniace

9 araliaceae

10 boryaceae

11 xanthorrho

12 brassicace

13 plantagina

14 caryophyll

15 leguminosa

16 colchicace

17 pteridacea

18 asparagace

19 apocynacea

20 juncaginac

21 zygophylla

22 aizoaceae

23 apiaceae

24 haloragace

25 scrophular

26 boraginace

27 malvaceae

28 loganiacea

29 orobanchac

30 euphorbiac

31 campanulac

32 iridaceae

33 cyperaceae

34 celastrace

35 orchidacea

36 phyllantha

37 solanaceae

38 centrolepi

39 primulacea

40 oxalidacea

41 thymelaeac

42 droseracea

43 stylidiace

44 urticaceae

45 santalacea

46 ophiogloss

47 polygonace

48 proteaceae

49 dilleniace

sqlite> SELECT family.family, genus.genus, species.species

...> FROM family, genus, species,

...> WHERE species.family = family.family\_id

...> AND species.genus = genus.genus\_id;

Error: near "WHERE": syntax error

sqlite> SELECT family.family, genus.genus, species.species

...> FROM family, genus, species

...> WHERE species.family = family.family\_id

...> AND species.genus = genus.genus\_id;

family genus species

---------- ---------- ----------

aizoaceae actinobole uliginosum

aizoaceae aira cupaniana

amaranthac angianthus tomentosus

amaranthac arctotheca calendula

amaranthac aristida contorta

amaranthac arthropodi curvipes

amaranthac arthropodi dyeri

amaranthac atriplex sp

amaranthac austrostip elegantiss

amaranthac austrostip sp

amaranthac austrostip sp3

amaranthac austrostip macalpinei

apiaceae avena barbata

apocynacea bellida graminea

araliaceae blennospor drummondii

araliaceae borya sphaerocep

araliaceae brachyscom iberidifol

araliaceae brachyscom perpusilla

asparagace brachyscom ciliaris

asparagace brassica tournefort

asparagace briza maxima

asparagace bromus rubens

asparagace bromus sp

asparagace bromus diandrus

asparagace brunonia australis

boraginace bulbine semibarbat

boryaceae burchardia congesta

brassicace caesia micrantha

brassicace caladenia sp

brassicace caladenia denticulat

brassicace caladenia roei

brassicace calandrini corrigiolo

brassicace calandrini granulifer

campanulac calandrini eremaea

campanulac calocephal multifloru

campanulac calotis hispidula

caryophyll calotis multicauli

caryophyll carrichter annua

caryophyll centrolepi drummondia

celastrace centrolepi sp

centrolepi centrolepi sp2

centrolepi centrolepi aristata

centrolepi cephalipte drummondii

centrolepi ceratogyne obionoides

colchicace chamaescil versicolor

colchicace cheilanthe austrotenu

colchicace chthonocep pseudevax

colchicace cotula bipinnata

compositae crassula colorata

compositae crassula closiana

compositae cyanicula amplexans

compositae cyanicula gemmata

compositae dampiera lavandulac

compositae daucus glochidiat

compositae dianella revoluta

compositae dichopogon capillipes

compositae drosera erythrorhi

compositae drosera glandulige

compositae drosera macrantha

compositae echium plantagine

compositae ehrharta longiflora

compositae emex australis

compositae enchylaena tomentosa

compositae erodium aureum

compositae erodium botrys

compositae erodium cicutarium

compositae erodium cygnorum

compositae erymophyll ramosum

compositae euphorbia drummondii

compositae gilberta tenuifolia

compositae gilruthia osbornei

compositae gnephosis tenuissima

compositae gonocarpus nodulosus

compositae goodenia berardiana

compositae goodenia occidental

compositae goodenia pusilliflo

compositae goodenia krauseana

compositae grevillea paniculata

compositae haloragis odontocarp

compositae hedypnois rhagadiolo

compositae hibbertia glomerosa

compositae hordeum leporinum

compositae hyalosperm glutinosum

compositae hyalosperm demissum

compositae hyalosperm glutinosum

compositae hydrocotyl pilifera

compositae hypochaeri glabra

compositae isoetopsis graminifol

compositae isotropis juncea

compositae juncus bufonius

compositae lamarckia aurea

compositae lawrencell rosea

compositae lawrencell davenporti

compositae lepidium bonariense

compositae levenhooki dubia

compositae levenhooki leptantha

compositae lobelia gibbosa

compositae lolium perenne

compositae lomandra effusa

compositae lysimachia arvensis

compositae medicago minima

compositae medicago polymorpha

crassulace menkea sphaerocar

crassulace mesembryan crystallin

cyperaceae mesembryan nodiflorum

dilleniace millotia myosotidif

droseracea millotia tenuifolia

droseracea monachathe paradoxus

droseracea monoculus monstrosus

euphorbiac moraea flaccida

geraniacea moraea setifolia

geraniacea myriocepha guerinae

geraniacea neurachne alopecuroi

geraniacea nicotiana rotundifol

goodeniace ophiogloss lusitanicu

goodeniace oxalis perennans

goodeniace parentucel latifolia

goodeniace parietaria cardiosteg

goodeniace pentameris airoides

goodeniace petrorhagi dubia

goodeniace pheladenia deformis

goodeniace phyllangiu sulcatum

haloragace pimelea imbricata

haloragace plantago coronopus

iridaceae plantago debilis

iridaceae podolepis capillaris

iridaceae podolepis lessonii

juncaceae podolepis canescens

juncaginac podotheca angustifol

leguminosa podotheca gnaphalioi

leguminosa pogonolepi muellerian

leguminosa polycarpon tetraphyll

leguminosa poranthera microphyll

leguminosa prasophyll gracile

leguminosa ptilotus polystachy

loganiacea ptilotus gaudichaud

malvaceae ptilotus exaltatus

ophiogloss ptilotus drummondii

orchidacea ptilotus spathulatu

orchidacea ptilotus declinatus

orchidacea ptilotus holoserice

orchidacea ptilotus sp

orchidacea quinetia urvillei

orchidacea rapistrum rugosum

orchidacea rhodanthe pygmaea

orobanchac rhodanthe chloroceph

oxalidacea rhodanthe citrina

phyllantha rhodanthe spicata

plantagina rhodanthe humboldtia

plantagina rhodanthe laevis

poaceae rhodanthe maryonii

poaceae rhodanthe polycephal

poaceae rhodanthe manglesii

poaceae rhyncharrh linearis

poaceae romulea rosea

poaceae rostraria pumila

poaceae rytidosper caespitosu

poaceae santalum spicatum

poaceae schoenia cassiniana

poaceae schoenus nanus

poaceae senecio glossanthu

poaceae sida sp

poaceae silene nocturna

poaceae sonchus oleraceus

poaceae stackhousi monogyna

poaceae stenopetal lineare

poaceae thysanotus manglesian

poaceae thysanotus rectanther

poaceae trachymene pilosa

poaceae trachymene cyanopetal

poaceae trachymene ornata

poaceae trifolium subterrane

polygonace trifolium hirtum

portulacac trifolium glomeratum

portulacac triglochin isingiana

portulacac urospermum picroides

primulacea ursinia anthemoide

proteaceae velleia rosea

pteridacea velleia cycnopotam

santalacea vulpia bromoides

scrophular vulpia myuros

solanaceae wahlenberg capensis

stylidiace wahlenberg gracilenta

stylidiace waitzia acuminata

thymelaeac waitzia nitida

urticaceae wurmbea drummondii

xanthorrho wurmbea spPaynes.F

xanthorrho wurmbea densiflora

xanthorrho zaluziansk divaricata

zygophylla zygophyllu iodocarpum

sqlite> SELECT species.family, species.genus, species.species

...> FROM family, genus, species

...> WHERE species.family = family.family\_id

...> AND species.genus = genus.genus\_id;

family genus species

---------- ---------- ----------

22 9 uliginosum

22 77 cupaniana

4 53 tomentosus

4 1 calendula

4 10 contorta

4 67 curvipes

4 67 dyeri

4 41 sp

4 2 elegantiss

4 2 sp

4 2 sp3

4 2 macalpinei

23 25 barbata

19 108 graminea

9 18 drummondii

9 23 sphaerocep

9 30 iberidifol

9 30 perpusilla

18 30 ciliaris

18 26 tournefort

18 78 maxima

18 3 rubens

18 3 sp

18 3 diandrus

18 118 australis

26 27 semibarbat

10 43 congesta

12 24 micrantha

12 107 sp

12 107 denticulat

12 107 roei

12 11 corrigiolo

12 11 granulifer

31 11 eremaea

31 125 multifloru

31 36 hispidula

14 36 multicauli

14 72 annua

14 94 drummondia

34 94 sp

38 94 sp2

38 94 aristata

38 34 drummondii

38 64 obionoides

16 117 versicolor

16 44 austrotenu

16 106 pseudevax

16 119 bipinnata

1 4 colorata

1 4 closiana

1 123 amplexans

1 123 gemmata

1 100 lavandulac

1 59 glochidiat

1 116 revoluta

1 47 capillipes

1 98 erythrorhi

1 98 glandulige

1 98 macrantha

1 69 plantagine

1 31 longiflora

1 113 australis

1 5 tomentosa

1 12 aureum

1 12 botrys

1 12 cicutarium

1 12 cygnorum

1 71 ramosum

1 81 drummondii

1 62 tenuifolia

1 109 osbornei

1 45 tenuissima

1 74 nodulosus

1 42 berardiana

1 42 occidental

1 42 pusilliflo

1 42 krauseana

1 114 paniculata

1 61 odontocarp

1 79 rhagadiolo

1 120 glomerosa

1 54 leporinum

1 13 glutinosum

1 13 demissum

1 13 glutinosum

1 38 pilifera

1 6 glabra

1 73 graminifol

1 121 juncea

1 19 bufonius

1 60 aurea

1 48 rosea

1 48 davenporti

1 124 bonariense

1 99 dubia

1 99 leptantha

1 85 gibbosa

1 7 perenne

1 104 effusa

1 95 arvensis

1 39 minima

1 39 polymorpha

3 110 sphaerocar

3 56 crystallin

33 56 nodiflorum

49 32 myosotidif

42 32 tenuifolia

42 66 paradoxus

42 28 monstrosus

30 83 flaccida

6 83 setifolia

6 112 guerinae

6 87 alopecuroi

6 93 rotundifol

8 105 lusitanicu

8 96 perennans

8 80 latifolia

8 102 cardiosteg

8 8 airoides

8 37 dubia

8 122 deformis

8 76 sulcatum

24 97 imbricata

24 35 coronopus

32 35 debilis

32 14 capillaris

32 14 lessonii

7 14 canescens

20 49 angustifol

15 49 gnaphalioi

15 33 muellerian

15 126 tetraphyll

15 92 microphyll

15 90 gracile

15 17 polystachy

28 17 gaudichaud

27 17 exaltatus

46 17 drummondii

35 17 spathulatu

35 17 declinatus

35 17 holoserice

35 17 sp

35 88 urvillei

35 101 rugosum

35 15 pygmaea

29 15 chloroceph

40 15 citrina

36 15 spicata

13 15 humboldtia

13 15 laevis

2 15 maryonii

2 15 polycephal

2 15 manglesii

2 50 linearis

2 115 rosea

2 58 pumila

2 84 caespitosu

2 103 spicatum

2 63 cassiniana

2 86 nanus

2 40 glossanthu

2 75 sp

2 57 nocturna

2 29 oleraceus

2 89 monogyna

2 65 lineare

2 91 manglesian

2 91 rectanther

2 22 pilosa

2 22 cyanopetal

2 22 ornata

2 55 subterrane

47 55 hirtum

5 55 glomeratum

5 51 isingiana

5 70 picroides

39 46 anthemoide

48 21 rosea

17 21 cycnopotam

45 20 bromoides

25 20 myuros

37 82 capensis

43 82 gracilenta

43 16 acuminata

41 16 nitida

44 111 drummondii

11 111 spPaynes.F

11 111 densiflora

11 68 divaricata

21 52 iodocarpum

sqlite>

sqlite> SELECT f.family, g.genus, s.species

...> FROM family f, genus g, species s

...> WHERE species.family = family.family\_id

...> AND species.genus = genus.genus\_id;

Error: no such column: species.family

sqlite> select family.family, genus.genus, species from species

...> join family on species.family = family.family\_id

...> join genus on species.genus = genus.genus\_id;

family genus species

---------- ---------- ----------

aizoaceae actinobole uliginosum

aizoaceae aira cupaniana

amaranthac angianthus tomentosus

amaranthac arctotheca calendula

amaranthac aristida contorta

amaranthac arthropodi curvipes

amaranthac arthropodi dyeri

amaranthac atriplex sp

amaranthac austrostip elegantiss

amaranthac austrostip sp

amaranthac austrostip sp3

amaranthac austrostip macalpinei

apiaceae avena barbata

apocynacea bellida graminea

araliaceae blennospor drummondii

araliaceae borya sphaerocep

araliaceae brachyscom iberidifol

araliaceae brachyscom perpusilla

asparagace brachyscom ciliaris

asparagace brassica tournefort

asparagace briza maxima

asparagace bromus rubens

asparagace bromus sp

asparagace bromus diandrus

asparagace brunonia australis

boraginace bulbine semibarbat

boryaceae burchardia congesta

brassicace caesia micrantha

brassicace caladenia sp

brassicace caladenia denticulat

brassicace caladenia roei

brassicace calandrini corrigiolo

brassicace calandrini granulifer

campanulac calandrini eremaea

campanulac calocephal multifloru

campanulac calotis hispidula

caryophyll calotis multicauli

caryophyll carrichter annua

caryophyll centrolepi drummondia

celastrace centrolepi sp

centrolepi centrolepi sp2

centrolepi centrolepi aristata

centrolepi cephalipte drummondii

centrolepi ceratogyne obionoides

colchicace chamaescil versicolor

colchicace cheilanthe austrotenu

colchicace chthonocep pseudevax

colchicace cotula bipinnata

compositae crassula colorata

compositae crassula closiana

compositae cyanicula amplexans

compositae cyanicula gemmata

compositae dampiera lavandulac

compositae daucus glochidiat

compositae dianella revoluta

compositae dichopogon capillipes

compositae drosera erythrorhi

compositae drosera glandulige

compositae drosera macrantha

compositae echium plantagine

compositae ehrharta longiflora

compositae emex australis

compositae enchylaena tomentosa

compositae erodium aureum

compositae erodium botrys

compositae erodium cicutarium

compositae erodium cygnorum

compositae erymophyll ramosum

compositae euphorbia drummondii

compositae gilberta tenuifolia

compositae gilruthia osbornei

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compositae hyalosperm glutinosum

compositae hyalosperm demissum

compositae hyalosperm glutinosum

compositae hydrocotyl pilifera

compositae hypochaeri glabra

compositae isoetopsis graminifol

compositae isotropis juncea

compositae juncus bufonius

compositae lamarckia aurea

compositae lawrencell rosea

compositae lawrencell davenporti

compositae lepidium bonariense

compositae levenhooki dubia

compositae levenhooki leptantha

compositae lobelia gibbosa

compositae lolium perenne

compositae lomandra effusa

compositae lysimachia arvensis

compositae medicago minima

compositae medicago polymorpha

crassulace menkea sphaerocar

crassulace mesembryan crystallin

cyperaceae mesembryan nodiflorum

dilleniace millotia myosotidif

droseracea millotia tenuifolia

droseracea monachathe paradoxus

droseracea monoculus monstrosus

euphorbiac moraea flaccida

geraniacea moraea setifolia

geraniacea myriocepha guerinae

geraniacea neurachne alopecuroi

geraniacea nicotiana rotundifol

goodeniace ophiogloss lusitanicu

goodeniace oxalis perennans

goodeniace parentucel latifolia

goodeniace parietaria cardiosteg

goodeniace pentameris airoides

goodeniace petrorhagi dubia

goodeniace pheladenia deformis

goodeniace phyllangiu sulcatum

haloragace pimelea imbricata

haloragace plantago coronopus

iridaceae plantago debilis

iridaceae podolepis capillaris

iridaceae podolepis lessonii

juncaceae podolepis canescens

juncaginac podotheca angustifol

leguminosa podotheca gnaphalioi

leguminosa pogonolepi muellerian

leguminosa polycarpon tetraphyll

leguminosa poranthera microphyll

leguminosa prasophyll gracile

leguminosa ptilotus polystachy

loganiacea ptilotus gaudichaud

malvaceae ptilotus exaltatus

ophiogloss ptilotus drummondii

orchidacea ptilotus spathulatu

orchidacea ptilotus declinatus

orchidacea ptilotus holoserice

orchidacea ptilotus sp

orchidacea quinetia urvillei

orchidacea rapistrum rugosum

orchidacea rhodanthe pygmaea

orobanchac rhodanthe chloroceph

oxalidacea rhodanthe citrina

phyllantha rhodanthe spicata

plantagina rhodanthe humboldtia

plantagina rhodanthe laevis

poaceae rhodanthe maryonii

poaceae rhodanthe polycephal

poaceae rhodanthe manglesii

poaceae rhyncharrh linearis

poaceae romulea rosea

poaceae rostraria pumila

poaceae rytidosper caespitosu

poaceae santalum spicatum

poaceae schoenia cassiniana

poaceae schoenus nanus

poaceae senecio glossanthu

poaceae sida sp

poaceae silene nocturna

poaceae sonchus oleraceus

poaceae stackhousi monogyna

poaceae stenopetal lineare

poaceae thysanotus manglesian

poaceae thysanotus rectanther

poaceae trachymene pilosa

poaceae trachymene cyanopetal

poaceae trachymene ornata

poaceae trifolium subterrane

polygonace trifolium hirtum

portulacac trifolium glomeratum

portulacac triglochin isingiana

portulacac urospermum picroides

primulacea ursinia anthemoide

proteaceae velleia rosea

pteridacea velleia cycnopotam

santalacea vulpia bromoides

scrophular vulpia myuros

solanaceae wahlenberg capensis

stylidiace wahlenberg gracilenta

stylidiace waitzia acuminata

thymelaeac waitzia nitida

urticaceae wurmbea drummondii

xanthorrho wurmbea spPaynes.F

xanthorrho wurmbea densiflora

xanthorrho zaluziansk divaricata

zygophylla zygophyllu iodocarpum

sqlite> select \* from family limit 5;

family\_id family

---------- ----------

1 compositae

2 poaceae

3 crassulace

4 amaranthac

5 portulacac

sqlite> select \* from species limit 5;

species\_id family genus species invasive habit life\_form

---------- ---------- ---------- ---------- ---------- ---------- ----------

1 22 9 uliginosum 1 1 1

2 22 77 cupaniana 2 1 1

3 4 53 tomentosus 1 1 1

4 4 1 calendula 2 1 1

5 4 10 contorta 1 2 1

sqlite> .schema family

CREATE TABLE family (

family\_id integer PRIMARY KEY,

family text NOT NULL);

sqlite> .schema genus

CREATE TABLE genus (

genus\_id integer NOT NULL PRIMARY KEY,

genus text NOT NULL);

sqlite> drop table family;

sqlite> CREATE TABLE family (

...> family\_id integer NOT NULL PRIMARY KEY,

...> family text NOT NULL);

sqlite>

sqlite> .mode csv

sqlite> .import family.csv family

sqlite> select family.family, genus.genus, species from species

...> join family on species.family = family.family\_id

...> join genus on species.genus = genus.genus\_id;

family,genus,species

aizoaceae,actinobole,uliginosum

aizoaceae,aira,cupaniana

amaranthaceae,angianthus,tomentosus

amaranthaceae,arctotheca,calendula

amaranthaceae,aristida,contorta

amaranthaceae,arthropodium,curvipes

amaranthaceae,arthropodium,dyeri

amaranthaceae,atriplex,sp

amaranthaceae,austrostipa,elegantissima

amaranthaceae,austrostipa,sp

amaranthaceae,austrostipa,sp3

amaranthaceae,austrostipa,macalpinei

apiaceae,avena,barbata

apocynaceae,bellida,graminea

araliaceae,blennospora,drummondii

araliaceae,borya,sphaerocephala

araliaceae,brachyscome,iberidifolia

araliaceae,brachyscome,perpusilla

asparagaceae,brachyscome,ciliaris

asparagaceae,brassica,tournefortii

asparagaceae,briza,maxima

asparagaceae,bromus,rubens

asparagaceae,bromus,sp

asparagaceae,bromus,diandrus

asparagaceae,brunonia,australis

boraginaceae,bulbine,semibarbata

boryaceae,burchardia,congesta

brassicaceae,caesia,micrantha

brassicaceae,caladenia,sp

brassicaceae,caladenia,denticulata

brassicaceae,caladenia,roei

brassicaceae,calandrinia,corrigioloides

brassicaceae,calandrinia,granulifera

campanulaceae,calandrinia,eremaea

campanulaceae,calocephalus,multiflorus

campanulaceae,calotis,hispidula

caryophyllaceae,calotis,multicaulis

caryophyllaceae,carrichtera,annua

caryophyllaceae,centrolepis,drummondiana

celastraceae,centrolepis,sp

centrolepidaceae,centrolepis,sp2

centrolepidaceae,centrolepis,aristata

centrolepidaceae,cephalipterum,drummondii

centrolepidaceae,ceratogyne,obionoides

colchicaceae,chamaescilla,versicolor

colchicaceae,cheilanthes,austrotenuifolia

colchicaceae,chthonocephalus,pseudevax

colchicaceae,cotula,bipinnata

compositae,crassula,colorata

compositae,crassula,closiana

compositae,cyanicula,amplexans

compositae,cyanicula,gemmata

compositae,dampiera,lavandulacea

compositae,daucus,glochidiatus

compositae,dianella,revoluta

compositae,dichopogon,capillipes

compositae,drosera,erythrorhiza

compositae,drosera,glanduligera

compositae,drosera,macrantha

compositae,echium,plantagineum

compositae,ehrharta,longiflora

compositae,emex,australis

compositae,enchylaena,tomentosa

compositae,erodium,aureum

compositae,erodium,botrys

compositae,erodium,cicutarium

compositae,erodium,cygnorum

compositae,erymophyllum,ramosum

compositae,euphorbia,drummondii

compositae,gilberta,tenuifolia

compositae,gilruthia,osbornei

compositae,gnephosis,tenuissima

compositae,gonocarpus,nodulosus

compositae,goodenia,berardiana

compositae,goodenia,occidentalis

compositae,goodenia,pusilliflora

compositae,goodenia,krauseana

compositae,grevillea,paniculata

compositae,haloragis,odontocarpa

compositae,hedypnois,rhagadioloides

compositae,hibbertia,glomerosa

compositae,hordeum,leporinum

compositae,hyalosperma,glutinosum.subsp.glutinosum

compositae,hyalosperma,demissum

compositae,hyalosperma,glutinosum.subsp.venustum

compositae,hydrocotyle,pilifera

compositae,hypochaeris,glabra

compositae,isoetopsis,graminifolia

compositae,isotropis,juncea

compositae,juncus,bufonius

compositae,lamarckia,aurea

compositae,lawrencella,rosea

compositae,lawrencella,davenportii

compositae,lepidium,bonariense

compositae,levenhookia,dubia

compositae,levenhookia,leptantha

compositae,lobelia,gibbosa

compositae,lolium,perenne

compositae,lomandra,effusa

compositae,lysimachia,arvensis

compositae,medicago,minima

compositae,medicago,polymorpha

crassulaceae,menkea,sphaerocarpa

crassulaceae,mesembryanthemum,crystallinum

cyperaceae,mesembryanthemum,nodiflorum

dilleniaceae,millotia,myosotidifolia

droseraceae,millotia,tenuifolia

droseraceae,monachather,paradoxus

droseraceae,monoculus,monstrosus

euphorbiaceae,moraea,flaccida

geraniaceae,moraea,setifolia

geraniaceae,myriocephalus,guerinae

geraniaceae,neurachne,alopecuroidea

geraniaceae,nicotiana,rotundifolia

goodeniaceae,ophioglossum,lusitanicum

goodeniaceae,oxalis,perennans

goodeniaceae,parentucellia,latifolia

goodeniaceae,parietaria,cardiostegia

goodeniaceae,pentameris,airoides

goodeniaceae,petrorhagia,dubia

goodeniaceae,pheladenia,deformis

goodeniaceae,phyllangium,sulcatum

haloragaceae,pimelea,imbricata

haloragaceae,plantago,coronopus

iridaceae,plantago,debilis

iridaceae,podolepis,capillaris

iridaceae,podolepis,lessonii

juncaceae,podolepis,canescens

juncaginaceae,podotheca,angustifolia

leguminosae,podotheca,gnaphalioides

leguminosae,pogonolepis,muelleriana

leguminosae,polycarpon,tetraphyllum

leguminosae,poranthera,microphylla

leguminosae,prasophyllum,gracile

leguminosae,ptilotus,polystachyus

loganiaceae,ptilotus,gaudichaudii

malvaceae,ptilotus,exaltatus

ophioglossaceae,ptilotus,drummondii

orchidaceae,ptilotus,spathulatus

orchidaceae,ptilotus,declinatus

orchidaceae,ptilotus,holosericeus

orchidaceae,ptilotus,sp

orchidaceae,quinetia,urvillei

orchidaceae,rapistrum,rugosum

orchidaceae,rhodanthe,pygmaea

orobanchaceae,rhodanthe,chlorocephala

oxalidaceae,rhodanthe,citrina

phyllanthaceae,rhodanthe,spicata

plantaginaceae,rhodanthe,humboldtiana

plantaginaceae,rhodanthe,laevis

poaceae,rhodanthe,maryonii

poaceae,rhodanthe,polycephala

poaceae,rhodanthe,manglesii

poaceae,rhyncharrhena,linearis

poaceae,romulea,rosea

poaceae,rostraria,pumila

poaceae,rytidosperma,caespitosum

poaceae,santalum,spicatum

poaceae,schoenia,cassiniana

poaceae,schoenus,nanus

poaceae,senecio,glossanthus

poaceae,sida,sp

poaceae,silene,nocturna

poaceae,sonchus,oleraceus

poaceae,stackhousia,monogyna

poaceae,stenopetalum,lineare

poaceae,thysanotus,manglesianus

poaceae,thysanotus,rectantherus

poaceae,trachymene,pilosa

poaceae,trachymene,cyanopetala

poaceae,trachymene,ornata

poaceae,trifolium,subterraneum

polygonaceae,trifolium,hirtum

portulacaceae,trifolium,glomeratum

portulacaceae,triglochin,isingiana

portulacaceae,urospermum,picroides

primulaceae,ursinia,anthemoides

proteaceae,velleia,rosea

pteridaceae,velleia,cycnopotamica

santalaceae,vulpia,bromoides

scrophulariaceae,vulpia,myuros

solanaceae,wahlenbergia,capensis

stylidiaceae,wahlenbergia,gracilenta

stylidiaceae,waitzia,acuminata

thymelaeaceae,waitzia,nitida

urticaceae,wurmbea,drummondii

xanthorrhoeaceae,wurmbea,spPaynes.Find

xanthorrhoeaceae,wurmbea,densiflora

xanthorrhoeaceae,zaluzianskya,divaricata

zygophyllaceae,zygophyllum,iodocarpum

sqlite> .mode columns

sqlite> SELECT f.family, g.genus, s.species

...> FROM family f, genus g, species s

...> WHERE species.family = family.family\_id

...> AND species.genus = genus.genus\_id;

Error: no such column: species.family

sqlite> select \* from species limit 5;

species\_id family genus species invasive habit life\_form

---------- ---------- ---------- ---------- ---------- ---------- ----------

1 22 9 uliginosum 1 1 1

2 22 77 cupaniana 2 1 1

3 4 53 tomentosus 1 1 1

4 4 1 calendula 2 1 1

5 4 10 contorta 1 2 1

sqlite> select family from species limit 5;

family

----------

22

22

4

4

4

sqlite> SELECT f.family, g.genus, s.species

...> FROM family f, genus g, species s

...> AND s.genus = g.genus\_id

...> WHERE s.family = f.family\_id;

Error: near "AND": syntax error

sqlite> SELECT f.family, g.genus, s.species

...> FROM family f, genus g, species s

...> WHERE s.genus = g.genus\_id

...> AND s.family = f.family\_id;

family genus species

---------- ---------- ----------

aizoaceae actinobole uliginosum

aizoaceae aira cupaniana

amaranthac angianthus tomentosus

amaranthac arctotheca calendula

amaranthac aristida contorta

amaranthac arthropodi curvipes

amaranthac arthropodi dyeri

amaranthac atriplex sp

amaranthac austrostip elegantiss

amaranthac austrostip sp

amaranthac austrostip sp3

amaranthac austrostip macalpinei

apiaceae avena barbata

apocynacea bellida graminea

araliaceae blennospor drummondii

araliaceae borya sphaerocep

araliaceae brachyscom iberidifol

araliaceae brachyscom perpusilla

asparagace brachyscom ciliaris

asparagace brassica tournefort

asparagace briza maxima

asparagace bromus rubens

asparagace bromus sp

asparagace bromus diandrus

asparagace brunonia australis

boraginace bulbine semibarbat

boryaceae burchardia congesta

brassicace caesia micrantha

brassicace caladenia sp

brassicace caladenia denticulat

brassicace caladenia roei

brassicace calandrini corrigiolo

brassicace calandrini granulifer

campanulac calandrini eremaea

campanulac calocephal multifloru

campanulac calotis hispidula

caryophyll calotis multicauli

caryophyll carrichter annua

caryophyll centrolepi drummondia

celastrace centrolepi sp

centrolepi centrolepi sp2

centrolepi centrolepi aristata

centrolepi cephalipte drummondii

centrolepi ceratogyne obionoides

colchicace chamaescil versicolor

colchicace cheilanthe austrotenu

colchicace chthonocep pseudevax

colchicace cotula bipinnata

compositae crassula colorata

compositae crassula closiana

compositae cyanicula amplexans

compositae cyanicula gemmata

compositae dampiera lavandulac

compositae daucus glochidiat

compositae dianella revoluta

compositae dichopogon capillipes

compositae drosera erythrorhi

compositae drosera glandulige

compositae drosera macrantha

compositae echium plantagine

compositae ehrharta longiflora

compositae emex australis

compositae enchylaena tomentosa

compositae erodium aureum

compositae erodium botrys

compositae erodium cicutarium

compositae erodium cygnorum

compositae erymophyll ramosum

compositae euphorbia drummondii

compositae gilberta tenuifolia

compositae gilruthia osbornei

compositae gnephosis tenuissima

compositae gonocarpus nodulosus

compositae goodenia berardiana

compositae goodenia occidental

compositae goodenia pusilliflo

compositae goodenia krauseana

compositae grevillea paniculata

compositae haloragis odontocarp

compositae hedypnois rhagadiolo

compositae hibbertia glomerosa

compositae hordeum leporinum

compositae hyalosperm glutinosum

compositae hyalosperm demissum

compositae hyalosperm glutinosum

compositae hydrocotyl pilifera

compositae hypochaeri glabra

compositae isoetopsis graminifol

compositae isotropis juncea

compositae juncus bufonius

compositae lamarckia aurea

compositae lawrencell rosea

compositae lawrencell davenporti

compositae lepidium bonariense

compositae levenhooki dubia

compositae levenhooki leptantha

compositae lobelia gibbosa

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compositae lomandra effusa

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compositae medicago minima

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crassulace menkea sphaerocar

crassulace mesembryan crystallin

cyperaceae mesembryan nodiflorum

dilleniace millotia myosotidif

droseracea millotia tenuifolia

droseracea monachathe paradoxus

droseracea monoculus monstrosus

euphorbiac moraea flaccida

geraniacea moraea setifolia

geraniacea myriocepha guerinae

geraniacea neurachne alopecuroi

geraniacea nicotiana rotundifol

goodeniace ophiogloss lusitanicu

goodeniace oxalis perennans

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goodeniace pentameris airoides

goodeniace petrorhagi dubia

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haloragace pimelea imbricata

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iridaceae plantago debilis

iridaceae podolepis capillaris

iridaceae podolepis lessonii

juncaceae podolepis canescens

juncaginac podotheca angustifol

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leguminosa polycarpon tetraphyll

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orobanchac rhodanthe chloroceph

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poaceae rhodanthe maryonii

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poaceae sida sp

poaceae silene nocturna

poaceae sonchus oleraceus

poaceae stackhousi monogyna

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poaceae thysanotus manglesian

poaceae thysanotus rectanther

poaceae trachymene pilosa

poaceae trachymene cyanopetal

poaceae trachymene ornata

poaceae trifolium subterrane

polygonace trifolium hirtum

portulacac trifolium glomeratum

portulacac triglochin isingiana

portulacac urospermum picroides

primulacea ursinia anthemoide

proteaceae velleia rosea

pteridacea velleia cycnopotam

santalacea vulpia bromoides

scrophular vulpia myuros

solanaceae wahlenberg capensis

stylidiace wahlenberg gracilenta

stylidiace waitzia acuminata

thymelaeac waitzia nitida

urticaceae wurmbea drummondii

xanthorrho wurmbea spPaynes.F

xanthorrho wurmbea densiflora

xanthorrho zaluziansk divaricata

zygophylla zygophyllu iodocarpum

sqlite> SELECT family.family, genus.genus, species.species

...> FROM species

...> INNER JOIN family on species.family=family.family\_id

...> INNER JOIN genus on species.genus = genus.genus.id;

Error: no such column: genus.genus.id

sqlite> SELECT family.family, genus.genus, species.species

...> FROM species

...> INNER JOIN family on species.family=family.family\_id

...> INNER JOIN genus on species.genus = genus.genus\_id;

family genus species

---------- ---------- ----------

aizoaceae actinobole uliginosum

aizoaceae aira cupaniana

amaranthac angianthus tomentosus

amaranthac arctotheca calendula

amaranthac aristida contorta

amaranthac arthropodi curvipes

amaranthac arthropodi dyeri

amaranthac atriplex sp

amaranthac austrostip elegantiss

amaranthac austrostip sp

amaranthac austrostip sp3

amaranthac austrostip macalpinei

apiaceae avena barbata

apocynacea bellida graminea

araliaceae blennospor drummondii

araliaceae borya sphaerocep

araliaceae brachyscom iberidifol

araliaceae brachyscom perpusilla

asparagace brachyscom ciliaris

asparagace brassica tournefort

asparagace briza maxima

asparagace bromus rubens

asparagace bromus sp

asparagace bromus diandrus

asparagace brunonia australis

boraginace bulbine semibarbat

boryaceae burchardia congesta

brassicace caesia micrantha

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brassicace caladenia roei

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brassicace calandrini granulifer

campanulac calandrini eremaea

campanulac calocephal multifloru

campanulac calotis hispidula

caryophyll calotis multicauli

caryophyll carrichter annua

caryophyll centrolepi drummondia

celastrace centrolepi sp

centrolepi centrolepi sp2

centrolepi centrolepi aristata

centrolepi cephalipte drummondii

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compositae dianella revoluta

compositae dichopogon capillipes

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compositae echium plantagine

compositae ehrharta longiflora

compositae emex australis

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compositae hordeum leporinum

compositae hyalosperm glutinosum

compositae hyalosperm demissum

compositae hyalosperm glutinosum

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compositae hypochaeri glabra

compositae isoetopsis graminifol

compositae isotropis juncea

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compositae lawrencell davenporti

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droseracea monachathe paradoxus

droseracea monoculus monstrosus

euphorbiac moraea flaccida

geraniacea moraea setifolia

geraniacea myriocepha guerinae

geraniacea neurachne alopecuroi

geraniacea nicotiana rotundifol

goodeniace ophiogloss lusitanicu

goodeniace oxalis perennans

goodeniace parentucel latifolia

goodeniace parietaria cardiosteg

goodeniace pentameris airoides

goodeniace petrorhagi dubia

goodeniace pheladenia deformis

goodeniace phyllangiu sulcatum

haloragace pimelea imbricata

haloragace plantago coronopus

iridaceae plantago debilis

iridaceae podolepis capillaris

iridaceae podolepis lessonii

juncaceae podolepis canescens

juncaginac podotheca angustifol

leguminosa podotheca gnaphalioi

leguminosa pogonolepi muellerian

leguminosa polycarpon tetraphyll

leguminosa poranthera microphyll

leguminosa prasophyll gracile

leguminosa ptilotus polystachy

loganiacea ptilotus gaudichaud

malvaceae ptilotus exaltatus

ophiogloss ptilotus drummondii

orchidacea ptilotus spathulatu

orchidacea ptilotus declinatus

orchidacea ptilotus holoserice

orchidacea ptilotus sp

orchidacea quinetia urvillei

orchidacea rapistrum rugosum

orchidacea rhodanthe pygmaea

orobanchac rhodanthe chloroceph

oxalidacea rhodanthe citrina

phyllantha rhodanthe spicata

plantagina rhodanthe humboldtia

plantagina rhodanthe laevis

poaceae rhodanthe maryonii

poaceae rhodanthe polycephal

poaceae rhodanthe manglesii

poaceae rhyncharrh linearis

poaceae romulea rosea

poaceae rostraria pumila

poaceae rytidosper caespitosu

poaceae santalum spicatum

poaceae schoenia cassiniana

poaceae schoenus nanus

poaceae senecio glossanthu

poaceae sida sp

poaceae silene nocturna

poaceae sonchus oleraceus

poaceae stackhousi monogyna

poaceae stenopetal lineare

poaceae thysanotus manglesian

poaceae thysanotus rectanther

poaceae trachymene pilosa

poaceae trachymene cyanopetal

poaceae trachymene ornata

poaceae trifolium subterrane

polygonace trifolium hirtum

portulacac trifolium glomeratum

portulacac triglochin isingiana

portulacac urospermum picroides

primulacea ursinia anthemoide

proteaceae velleia rosea

pteridacea velleia cycnopotam

santalacea vulpia bromoides

scrophular vulpia myuros

solanaceae wahlenberg capensis

stylidiace wahlenberg gracilenta

stylidiace waitzia acuminata

thymelaeac waitzia nitida

urticaceae wurmbea drummondii

xanthorrho wurmbea spPaynes.F

xanthorrho wurmbea densiflora

xanthorrho zaluziansk divaricata

zygophylla zygophyllu iodocarpum

sqlite> SELECT family, genus, species

...> FROM species

...> INNER JOIN family on species.family=family.family\_id

...> INNER JOIN genus on species.genus = genus.genus\_id;

Error: ambiguous column name: family

sqlite> SELECT family.family, genus.genus, species

...> FROM species

...> INNER JOIN family on species.family=family.family\_id

...> INNER JOIN genus on species.genus = genus.genus\_id;

family genus species

---------- ---------- ----------

aizoaceae actinobole uliginosum

aizoaceae aira cupaniana

amaranthac angianthus tomentosus

amaranthac arctotheca calendula

amaranthac aristida contorta

amaranthac arthropodi curvipes

amaranthac arthropodi dyeri

amaranthac atriplex sp

amaranthac austrostip elegantiss

amaranthac austrostip sp

amaranthac austrostip sp3

amaranthac austrostip macalpinei

apiaceae avena barbata

apocynacea bellida graminea

araliaceae blennospor drummondii

araliaceae borya sphaerocep

araliaceae brachyscom iberidifol

araliaceae brachyscom perpusilla

asparagace brachyscom ciliaris

asparagace brassica tournefort

asparagace briza maxima

asparagace bromus rubens

asparagace bromus sp

asparagace bromus diandrus

asparagace brunonia australis

boraginace bulbine semibarbat

boryaceae burchardia congesta

brassicace caesia micrantha

brassicace caladenia sp

brassicace caladenia denticulat

brassicace caladenia roei

brassicace calandrini corrigiolo

brassicace calandrini granulifer

campanulac calandrini eremaea

campanulac calocephal multifloru

campanulac calotis hispidula

caryophyll calotis multicauli

caryophyll carrichter annua

caryophyll centrolepi drummondia

celastrace centrolepi sp

centrolepi centrolepi sp2

centrolepi centrolepi aristata

centrolepi cephalipte drummondii

centrolepi ceratogyne obionoides

colchicace chamaescil versicolor

colchicace cheilanthe austrotenu

colchicace chthonocep pseudevax

colchicace cotula bipinnata

compositae crassula colorata

compositae crassula closiana

compositae cyanicula amplexans

compositae cyanicula gemmata

compositae dampiera lavandulac

compositae daucus glochidiat

compositae dianella revoluta

compositae dichopogon capillipes

compositae drosera erythrorhi

compositae drosera glandulige

compositae drosera macrantha

compositae echium plantagine

compositae ehrharta longiflora

compositae emex australis

compositae enchylaena tomentosa

compositae erodium aureum

compositae erodium botrys

compositae erodium cicutarium

compositae erodium cygnorum

compositae erymophyll ramosum

compositae euphorbia drummondii

compositae gilberta tenuifolia

compositae gilruthia osbornei

compositae gnephosis tenuissima

compositae gonocarpus nodulosus

compositae goodenia berardiana

compositae goodenia occidental

compositae goodenia pusilliflo

compositae goodenia krauseana

compositae grevillea paniculata

compositae haloragis odontocarp

compositae hedypnois rhagadiolo

compositae hibbertia glomerosa

compositae hordeum leporinum

compositae hyalosperm glutinosum

compositae hyalosperm demissum

compositae hyalosperm glutinosum

compositae hydrocotyl pilifera

compositae hypochaeri glabra

compositae isoetopsis graminifol

compositae isotropis juncea

compositae juncus bufonius

compositae lamarckia aurea

compositae lawrencell rosea

compositae lawrencell davenporti

compositae lepidium bonariense

compositae levenhooki dubia

compositae levenhooki leptantha

compositae lobelia gibbosa

compositae lolium perenne

compositae lomandra effusa

compositae lysimachia arvensis

compositae medicago minima

compositae medicago polymorpha

crassulace menkea sphaerocar

crassulace mesembryan crystallin

cyperaceae mesembryan nodiflorum

dilleniace millotia myosotidif

droseracea millotia tenuifolia

droseracea monachathe paradoxus

droseracea monoculus monstrosus

euphorbiac moraea flaccida

geraniacea moraea setifolia

geraniacea myriocepha guerinae

geraniacea neurachne alopecuroi

geraniacea nicotiana rotundifol

goodeniace ophiogloss lusitanicu

goodeniace oxalis perennans

goodeniace parentucel latifolia

goodeniace parietaria cardiosteg

goodeniace pentameris airoides

goodeniace petrorhagi dubia

goodeniace pheladenia deformis

goodeniace phyllangiu sulcatum

haloragace pimelea imbricata

haloragace plantago coronopus

iridaceae plantago debilis

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leguminosa polycarpon tetraphyll

leguminosa poranthera microphyll

leguminosa prasophyll gracile

leguminosa ptilotus polystachy

loganiacea ptilotus gaudichaud

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ophiogloss ptilotus drummondii

orchidacea ptilotus spathulatu

orchidacea ptilotus declinatus

orchidacea ptilotus holoserice

orchidacea ptilotus sp

orchidacea quinetia urvillei

orchidacea rapistrum rugosum

orchidacea rhodanthe pygmaea

orobanchac rhodanthe chloroceph

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poaceae trachymene cyanopetal

poaceae trachymene ornata

poaceae trifolium subterrane

polygonace trifolium hirtum

portulacac trifolium glomeratum

portulacac triglochin isingiana

portulacac urospermum picroides

primulacea ursinia anthemoide

proteaceae velleia rosea

pteridacea velleia cycnopotam

santalacea vulpia bromoides

scrophular vulpia myuros

solanaceae wahlenberg capensis

stylidiace wahlenberg gracilenta

stylidiace waitzia acuminata

thymelaeac waitzia nitida

urticaceae wurmbea drummondii

xanthorrho wurmbea spPaynes.F

xanthorrho wurmbea densiflora

xanthorrho zaluziansk divaricata

zygophylla zygophyllu iodocarpum

sqlite> select \* from family;

family\_id family

---------- ----------

1 compositae

2 poaceae

3 crassulace

4 amaranthac

5 portulacac

6 geraniacea

7 juncaceae

8 goodeniace

9 araliaceae

10 boryaceae

11 xanthorrho

12 brassicace

13 plantagina

14 caryophyll

15 leguminosa

16 colchicace

17 pteridacea

18 asparagace

19 apocynacea

20 juncaginac

21 zygophylla

22 aizoaceae

23 apiaceae

24 haloragace

25 scrophular

26 boraginace

27 malvaceae

28 loganiacea

29 orobanchac

30 euphorbiac

31 campanulac

32 iridaceae

33 cyperaceae

34 celastrace

35 orchidacea

36 phyllantha

37 solanaceae

38 centrolepi

39 primulacea

40 oxalidacea

41 thymelaeac

42 droseracea

43 stylidiace

44 urticaceae

45 santalacea

46 ophiogloss

47 polygonace

48 proteaceae

49 dilleniace

sqlite> select \* from species

...> ;

species\_id family genus species invasive habit life\_form

---------- ---------- ---------- ---------- ---------- ---------- ----------

1 22 9 uliginosum 1 1 1

2 22 77 cupaniana 2 1 1

3 4 53 tomentosus 1 1 1

4 4 1 calendula 2 1 1

5 4 10 contorta 1 2 1

6 4 67 curvipes 1 1 1

7 4 67 dyeri 1 1 1

8 4 41 sp 1 1 1

9 4 2 elegantiss 1 2 2

10 4 2 sp 1 2 1

11 4 2 sp3 1 1 1

12 4 2 macalpinei 1 2 2

13 23 25 barbata 2 1 1

14 19 108 graminea 1 2 2

15 9 18 drummondii 1 1 1

16 9 23 sphaerocep 1 1 2

17 9 30 iberidifol 1 1 1

18 9 30 perpusilla 1 1 1

19 18 30 ciliaris 1 1 1

20 18 26 tournefort 2 1 1

21 18 78 maxima 2 1 2

22 18 3 rubens 2 2 1

23 18 3 sp 2 2 1

24 18 3 diandrus 2 2 2

25 18 118 australis 1 1 1

26 26 27 semibarbat 1 1 1

27 10 43 congesta 1 1 1

28 12 24 micrantha 1 2 1

29 12 107 sp 1 2 2

30 12 107 denticulat 1 5 2

31 12 107 roei 1 2 2

32 12 11 corrigiolo 1 1 1

33 12 11 granulifer 1 1 1

34 31 11 eremaea 1 1 1

35 31 125 multifloru 1 6 2

36 31 36 hispidula 1 1 1

37 14 36 multicauli 1 1 1

38 14 72 annua 2 1 1

39 14 94 drummondia 1 1 1

40 34 94 sp 1 1 1

41 38 94 sp2 1 1 1

42 38 94 aristata 1 1 1

43 38 34 drummondii 1 1 1

44 38 64 obionoides 1 2 1

45 16 117 versicolor 1 2 2

46 16 44 austrotenu 1 1 1

47 16 106 pseudevax 1 3 2

48 16 119 bipinnata 2 1 1

49 1 4 colorata 1 1 1

50 1 4 closiana 1 1 1

51 1 123 amplexans 1 6 2

52 1 123 gemmata 1 5 2

53 1 100 lavandulac 1 1 1

54 1 59 glochidiat 1 1 1

55 1 116 revoluta 1 1 1

56 1 47 capillipes 1 1 1

57 1 98 erythrorhi 1 5 2

58 1 98 glandulige 1 2 2

59 1 98 macrantha 1 3 2

60 1 69 plantagine 2 1 1

61 1 31 longiflora 2 1 1

62 1 113 australis 2 2 2

63 1 5 tomentosa 1 3 2

64 1 12 aureum 2 1 1

65 1 12 botrys 2 1 1

66 1 12 cicutarium 2 3 2

67 1 12 cygnorum 1 1 1

68 1 71 ramosum 1 1 1

69 1 81 drummondii 1 1 1

70 1 62 tenuifolia 1 1 1

71 1 109 osbornei 1 1 1

72 1 45 tenuissima 1 1 1

73 1 74 nodulosus 1 2 1

74 1 42 berardiana 1 1 1

75 1 42 occidental 1 1 1

76 1 42 pusilliflo 1 1 1

77 1 42 krauseana 1 1 1

78 1 114 paniculata 1 3 2

79 1 61 odontocarp 1 1 1

80 1 79 rhagadiolo 2 1 1

81 1 120 glomerosa 1 2 2

82 1 54 leporinum 2 1 1

83 1 13 glutinosum 1 1 1

84 1 13 demissum 1 1 1

85 1 13 glutinosum 1 1 1

86 1 38 pilifera 1 1 1

87 1 6 glabra 2 1 1

88 1 73 graminifol 1 1 1

89 1 121 juncea 1 1 1

90 1 19 bufonius 2 2 1

91 1 60 aurea 2 1 1

92 1 48 rosea 1 2 1

93 1 48 davenporti 1 1 1

94 1 124 bonariense 2 5 2

95 1 99 dubia 1 1 1

96 1 99 leptantha 1 1 1

97 1 85 gibbosa 1 1 1

98 1 7 perenne 2 2 1

99 1 104 effusa 1 1 1

100 1 95 arvensis 2 2 1

101 1 39 minima 2 1 1

102 1 39 polymorpha 2 2 1

103 3 110 sphaerocar 1 2 2

104 3 56 crystallin 2 1 1

105 33 56 nodiflorum 2 2 2

106 49 32 myosotidif 1 1 1

107 42 32 tenuifolia 1 1 1

108 42 66 paradoxus 1 1 1

109 42 28 monstrosus 2 1 1

110 30 83 flaccida 2 3 2

111 6 83 setifolia 2 2 1

112 6 112 guerinae 1 1 1

113 6 87 alopecuroi 1 1 1

114 6 93 rotundifol 1 1 1

115 8 105 lusitanicu 1 1 1

116 8 96 perennans 1 3 2

117 8 80 latifolia 2 1 1

118 8 102 cardiosteg 1 1 1

119 8 8 airoides 2 2 1

120 8 37 dubia 2 1 1

121 8 122 deformis 1 5 2

122 8 76 sulcatum 1 1 1

123 24 97 imbricata 1 2 1

124 24 35 coronopus 2 3 2

125 32 35 debilis 1 1 1

126 32 14 capillaris 1 4 1

127 32 14 lessonii 1 1 1

128 7 14 canescens 1 1 1

129 20 49 angustifol 1 1 2

130 15 49 gnaphalioi 1 1 1

131 15 33 muellerian 1 1 1

132 15 126 tetraphyll 2 5 2

133 15 92 microphyll 1 2 1

134 15 90 gracile 1 1 1

135 15 17 polystachy 1 1 1

136 28 17 gaudichaud 1 1 1

137 27 17 exaltatus 1 1 1

138 46 17 drummondii 1 1 1

139 35 17 spathulatu 1 1 1

140 35 17 declinatus 1 1 1

141 35 17 holoserice 1 1 1

142 35 17 sp 1 3 2

143 35 88 urvillei 1 2 1

144 35 101 rugosum 2 1 1

145 35 15 pygmaea 1 1 1

146 29 15 chloroceph 1 1 1

147 40 15 citrina 1 1 2

148 36 15 spicata 1 1 1

149 13 15 humboldtia 1 1 1

150 13 15 laevis 1 1 1

151 2 15 maryonii 1 2 1

152 2 15 polycephal 1 1 1

153 2 15 manglesii 1 1 1

154 2 50 linearis 1 1 1

155 2 115 rosea 2 1 2

156 2 58 pumila 2 1 1

157 2 84 caespitosu 1 2 2

158 2 103 spicatum 1 1 1

159 2 63 cassiniana 1 2 2

160 2 86 nanus 1 1 2

161 2 40 glossanthu 1 3 2

162 2 75 sp 1 1 1

163 2 57 nocturna 2 1 1

164 2 29 oleraceus 2 1 1

165 2 89 monogyna 1 1 1

166 2 65 lineare 1 1 1

167 2 91 manglesian 1 1 1

168 2 91 rectanther 1 1 1

169 2 22 pilosa 1 1 1

170 2 22 cyanopetal 1 1 1

171 2 22 ornata 1 1 1

172 2 55 subterrane 2 1 1

173 47 55 hirtum 2 1 1

174 5 55 glomeratum 2 5 2

175 5 51 isingiana 1 1 1

176 5 70 picroides 2 1 1

177 39 46 anthemoide 2 4 2

178 48 21 rosea 1 2 2

179 17 21 cycnopotam 1 1 1

180 45 20 bromoides 2 1 1

181 25 20 myuros 2 2 1

182 37 82 capensis 2 2 1

183 43 82 gracilenta 1 1 1

184 43 16 acuminata 1 1 1

185 41 16 nitida 1 2 1

186 44 111 drummondii 1 5 2

187 11 111 spPaynes.F 1 7 2

188 11 111 densiflora 1 2 2

189 11 68 divaricata 2 1 1

190 21 52 iodocarpum 2 1 1

sqlite> DROP TABLE species;

sqlite> DROP TABLE family;

sqlite> DROP TABLE genus;

sqlite> DROP TABLE invasive;

sqlite> DROP TABLE habit;

sqlite> DROP TABLE life\_form;

sqlite>

sqlite> CREATE TABLE family (

...> family\_id integer NOT NULL PRIMARY KEY,

...> family text NOT NULL);

sqlite>

sqlite> .mode csv

sqlite> .import family.csv family

sqlite> CREATE TABLE genus (

...> genus\_id integer NOT NULL PRIMARY KEY,

...> genus text NOT NULL);

sqlite>

sqlite> .mode csv

sqlite> .import genus.csv genus

sqlite>

sqlite> CREATE TABLE invasive (

...> invasive\_id integer NOT NULL PRIMARY KEY,

...> invasive NOT NULL);

sqlite>

sqlite> .mode csv

sqlite> .import invasive.csv invasive

sqlite> CREATE TABLE habit (

...> habit\_id integer NOT NULL PRIMARY KEY,

...> habit text NOT NULL);

sqlite>

sqlite>

sqlite> .mode csv

sqlite> .import habit.csv habit

sqlite>

sqlite> CREATE TABLE life\_form (

...> life\_form\_id integer NOT NULL PRIMARY KEY,

...> life\_form text NOT NULL);

sqlite>

sqlite>

sqlite> .mode csv

sqlite> .import life\_form.csv life\_form

sqlite> CREATE TABLE species (

...> species\_id integer PRIMARY KEY,

...> family integer NOT NULL REFERENCES family(family\_id),

...> genus integer NOT NULL REFERENCES genus(genus\_id),

...> species integer NOT NULL,

...> invasive integer REFERENCES invasive(invasive\_id),

...> habit integer REFERENCES habit(habit\_id),

...> life\_form integer REFERENCES life\_form(life\_form\_id));

sqlite>

sqlite>

sqlite> .mode csv

sqlite> .import species.csv species

sqlite> select family.family, genus.genus, species from species

...> join family on species.family = family.family\_id

...> join genus on species.genus = genus.genus\_id;

family,genus,species

aizoaceae,mesembryanthemum,nodiflorum

aizoaceae,mesembryanthemum,crystallinum

amaranthaceae,ptilotus,declinatus

amaranthaceae,ptilotus,drummondii

amaranthaceae,ptilotus,polystachyus

amaranthaceae,enchylaena,tomentosa

amaranthaceae,ptilotus,holosericeus

amaranthaceae,ptilotus,gaudichaudii

amaranthaceae,ptilotus,exaltatus

amaranthaceae,ptilotus,sp

amaranthaceae,ptilotus,spathulatus

amaranthaceae,atriplex,sp

apiaceae,daucus,glochidiatus

apocynaceae,rhyncharrhena,linearis

araliaceae,trachymene,pilosa

araliaceae,hydrocotyle,pilifera

araliaceae,trachymene,cyanopetala

araliaceae,trachymene,ornata

asparagaceae,lomandra,effusa

asparagaceae,arthropodium,curvipes

asparagaceae,thysanotus,rectantherus

asparagaceae,arthropodium,dyeri

asparagaceae,dichopogon,capillipes

asparagaceae,chamaescilla,versicolor

asparagaceae,thysanotus,manglesianus

boraginaceae,echium,plantagineum

boryaceae,borya,sphaerocephala

brassicaceae,lepidium,bonariense

brassicaceae,menkea,sphaerocarpa

brassicaceae,brassica,tournefortii

brassicaceae,rapistrum,rugosum

brassicaceae,stenopetalum,lineare

brassicaceae,carrichtera,annua

campanulaceae,lobelia,gibbosa

campanulaceae,wahlenbergia,gracilenta

campanulaceae,wahlenbergia,capensis

caryophyllaceae,petrorhagia,dubia

caryophyllaceae,polycarpon,tetraphyllum

caryophyllaceae,silene,nocturna

celastraceae,stackhousia,monogyna

centrolepidaceae,centrolepis,aristata

centrolepidaceae,centrolepis,sp

centrolepidaceae,centrolepis,drummondiana

centrolepidaceae,centrolepis,sp2

colchicaceae,wurmbea,drummondii

colchicaceae,burchardia,congesta

colchicaceae,wurmbea,densiflora

colchicaceae,wurmbea,spPaynes.Find

compositae,actinobole,uliginosum

compositae,blennospora,drummondii

compositae,angianthus,tomentosus

compositae,arctotheca,calendula

compositae,hyalosperma,glutinosum.subsp.venustum

compositae,podolepis,capillaris

compositae,chthonocephalus,pseudevax

compositae,cotula,bipinnata

compositae,podotheca,angustifolia

compositae,podotheca,gnaphalioides

compositae,pogonolepis,muelleriana

compositae,lawrencella,rosea

compositae,lawrencella,davenportii

compositae,bellida,graminea

compositae,erymophyllum,ramosum

compositae,urospermum,picroides

compositae,brachyscome,iberidifolia

compositae,brachyscome,perpusilla

compositae,brachyscome,ciliaris

compositae,rhodanthe,manglesii

compositae,hypochaeris,glabra

compositae,calocephalus,multiflorus

compositae,quinetia,urvillei

compositae,waitzia,acuminata

compositae,rhodanthe,pygmaea

compositae,millotia,myosotidifolia

compositae,millotia,tenuifolia

compositae,senecio,glossanthus

compositae,monoculus,monstrosus

compositae,gilberta,tenuifolia

compositae,gilruthia,osbornei

compositae,gnephosis,tenuissima

compositae,myriocephalus,guerinae

compositae,rhodanthe,polycephala

compositae,isoetopsis,graminifolia

compositae,calotis,hispidula

compositae,calotis,multicaulis

compositae,rhodanthe,spicata

compositae,schoenia,cassiniana

compositae,hedypnois,rhagadioloides

compositae,rhodanthe,citrina

compositae,sonchus,oleraceus

compositae,cephalipterum,drummondii

compositae,ceratogyne,obionoides

compositae,rhodanthe,maryonii

compositae,hyalosperma,demissum

compositae,hyalosperma,glutinosum.subsp.glutinosum

compositae,podolepis,lessonii

compositae,podolepis,canescens

compositae,rhodanthe,laevis

compositae,waitzia,nitida

compositae,rhodanthe,chlorocephala

compositae,rhodanthe,humboldtiana

compositae,ursinia,anthemoides

crassulaceae,crassula,closiana

crassulaceae,crassula,colorata

cyperaceae,schoenus,nanus

dilleniaceae,hibbertia,glomerosa

droseraceae,drosera,erythrorhiza

droseraceae,drosera,macrantha

droseraceae,drosera,glanduligera

euphorbiaceae,euphorbia,drummondii

geraniaceae,erodium,aureum

geraniaceae,erodium,cygnorum

geraniaceae,erodium,botrys

geraniaceae,erodium,cicutarium

goodeniaceae,dampiera,lavandulacea

goodeniaceae,goodenia,krauseana

goodeniaceae,brunonia,australis

goodeniaceae,velleia,rosea

goodeniaceae,velleia,cycnopotamica

goodeniaceae,goodenia,occidentalis

goodeniaceae,goodenia,berardiana

goodeniaceae,goodenia,pusilliflora

haloragaceae,haloragis,odontocarpa

haloragaceae,gonocarpus,nodulosus

iridaceae,moraea,setifolia

iridaceae,moraea,flaccida

iridaceae,romulea,rosea

juncaceae,juncus,bufonius

juncaginaceae,triglochin,isingiana

leguminosae,trifolium,hirtum

leguminosae,trifolium,subterraneum

leguminosae,medicago,polymorpha

leguminosae,isotropis,juncea

leguminosae,medicago,minima

leguminosae,trifolium,glomeratum

loganiaceae,phyllangium,sulcatum

malvaceae,sida,sp

ophioglossaceae,ophioglossum,lusitanicum

orchidaceae,cyanicula,amplexans

orchidaceae,cyanicula,gemmata

orchidaceae,caladenia,sp

orchidaceae,pheladenia,deformis

orchidaceae,prasophyllum,gracile

orchidaceae,caladenia,roei

orchidaceae,caladenia,denticulata

orobanchaceae,parentucellia,latifolia

oxalidaceae,oxalis,perennans

phyllanthaceae,poranthera,microphylla

plantaginaceae,plantago,debilis

plantaginaceae,plantago,coronopus

poaceae,briza,maxima

poaceae,austrostipa,sp3

poaceae,bromus,diandrus

poaceae,austrostipa,sp

poaceae,hordeum,leporinum

poaceae,neurachne,alopecuroidea

poaceae,bromus,rubens

poaceae,aira,cupaniana

poaceae,vulpia,bromoides

poaceae,rytidosperma,caespitosum

poaceae,austrostipa,macalpinei

poaceae,austrostipa,elegantissima

poaceae,bromus,sp

poaceae,rostraria,pumila

poaceae,monachather,paradoxus

poaceae,avena,barbata

poaceae,aristida,contorta

poaceae,lolium,perenne

poaceae,ehrharta,longiflora

poaceae,vulpia,myuros

poaceae,lamarckia,aurea

poaceae,pentameris,airoides

polygonaceae,emex,australis

portulacaceae,calandrinia,eremaea

portulacaceae,calandrinia,granulifera

portulacaceae,calandrinia,corrigioloides

primulaceae,lysimachia,arvensis

proteaceae,grevillea,paniculata

pteridaceae,cheilanthes,austrotenuifolia

santalaceae,santalum,spicatum

scrophulariaceae,zaluzianskya,divaricata

solanaceae,nicotiana,rotundifolia

stylidiaceae,levenhookia,leptantha

stylidiaceae,levenhookia,dubia

thymelaeaceae,pimelea,imbricata

urticaceae,parietaria,cardiostegia

xanthorrhoeaceae,bulbine,semibarbata

xanthorrhoeaceae,caesia,micrantha

xanthorrhoeaceae,dianella,revoluta

zygophyllaceae,zygophyllum,iodocarpum

sqlite> .mode columns

sqlite> SELECT f.family, g.genus, s.species

...> FROM family f, genus g, species s

...> WHERE s.genus = g.genus\_id

...> AND s.family = f.family\_id;

family genus species

---------- ---------------- ----------

aizoaceae mesembryanthemum nodiflorum

aizoaceae mesembryanthemum crystallin

amaranthac ptilotus declinatus

amaranthac ptilotus drummondii

amaranthac ptilotus polystachy

amaranthac enchylaena tomentosa

amaranthac ptilotus holoserice

amaranthac ptilotus gaudichaud

amaranthac ptilotus exaltatus

amaranthac ptilotus sp

amaranthac ptilotus spathulatu

amaranthac atriplex sp

apiaceae daucus glochidiat

apocynacea rhyncharrhena linearis

araliaceae trachymene pilosa

araliaceae hydrocotyle pilifera

araliaceae trachymene cyanopetal

araliaceae trachymene ornata

asparagace lomandra effusa

asparagace arthropodium curvipes

asparagace thysanotus rectanther

asparagace arthropodium dyeri

asparagace dichopogon capillipes

asparagace chamaescilla versicolor

asparagace thysanotus manglesian

boraginace echium plantagine

boryaceae borya sphaerocep

brassicace lepidium bonariense

brassicace menkea sphaerocar

brassicace brassica tournefort

brassicace rapistrum rugosum

brassicace stenopetalum lineare

brassicace carrichtera annua

campanulac lobelia gibbosa

campanulac wahlenbergia gracilenta

campanulac wahlenbergia capensis

caryophyll petrorhagia dubia

caryophyll polycarpon tetraphyll

caryophyll silene nocturna

celastrace stackhousia monogyna

centrolepi centrolepis aristata

centrolepi centrolepis sp

centrolepi centrolepis drummondia

centrolepi centrolepis sp2

colchicace wurmbea drummondii

colchicace burchardia congesta

colchicace wurmbea densiflora

colchicace wurmbea spPaynes.F

compositae actinobole uliginosum

compositae blennospora drummondii

compositae angianthus tomentosus

compositae arctotheca calendula

compositae hyalosperma glutinosum

compositae podolepis capillaris

compositae chthonocephalus pseudevax

compositae cotula bipinnata

compositae podotheca angustifol

compositae podotheca gnaphalioi

compositae pogonolepis muellerian

compositae lawrencella rosea

compositae lawrencella davenporti

compositae bellida graminea

compositae erymophyllum ramosum

compositae urospermum picroides

compositae brachyscome iberidifol

compositae brachyscome perpusilla

compositae brachyscome ciliaris

compositae rhodanthe manglesii

compositae hypochaeris glabra

compositae calocephalus multifloru

compositae quinetia urvillei

compositae waitzia acuminata

compositae rhodanthe pygmaea

compositae millotia myosotidif

compositae millotia tenuifolia

compositae senecio glossanthu

compositae monoculus monstrosus

compositae gilberta tenuifolia

compositae gilruthia osbornei

compositae gnephosis tenuissima

compositae myriocephalus guerinae

compositae rhodanthe polycephal

compositae isoetopsis graminifol

compositae calotis hispidula

compositae calotis multicauli

compositae rhodanthe spicata

compositae schoenia cassiniana

compositae hedypnois rhagadiolo

compositae rhodanthe citrina

compositae sonchus oleraceus

compositae cephalipterum drummondii

compositae ceratogyne obionoides

compositae rhodanthe maryonii

compositae hyalosperma demissum

compositae hyalosperma glutinosum

compositae podolepis lessonii

compositae podolepis canescens

compositae rhodanthe laevis

compositae waitzia nitida

compositae rhodanthe chloroceph

compositae rhodanthe humboldtia

compositae ursinia anthemoide

crassulace crassula closiana

crassulace crassula colorata

cyperaceae schoenus nanus

dilleniace hibbertia glomerosa

droseracea drosera erythrorhi

droseracea drosera macrantha

droseracea drosera glandulige

euphorbiac euphorbia drummondii

geraniacea erodium aureum

geraniacea erodium cygnorum

geraniacea erodium botrys

geraniacea erodium cicutarium

goodeniace dampiera lavandulac

goodeniace goodenia krauseana

goodeniace brunonia australis

goodeniace velleia rosea

goodeniace velleia cycnopotam

goodeniace goodenia occidental

goodeniace goodenia berardiana

goodeniace goodenia pusilliflo

haloragace haloragis odontocarp

haloragace gonocarpus nodulosus

iridaceae moraea setifolia

iridaceae moraea flaccida

iridaceae romulea rosea

juncaceae juncus bufonius

juncaginac triglochin isingiana

leguminosa trifolium hirtum

leguminosa trifolium subterrane

leguminosa medicago polymorpha

leguminosa isotropis juncea

leguminosa medicago minima

leguminosa trifolium glomeratum

loganiacea phyllangium sulcatum

malvaceae sida sp

ophiogloss ophioglossum lusitanicu

orchidacea cyanicula amplexans

orchidacea cyanicula gemmata

orchidacea caladenia sp

orchidacea pheladenia deformis

orchidacea prasophyllum gracile

orchidacea caladenia roei

orchidacea caladenia denticulat

orobanchac parentucellia latifolia

oxalidacea oxalis perennans

phyllantha poranthera microphyll

plantagina plantago debilis

plantagina plantago coronopus

poaceae briza maxima

poaceae austrostipa sp3

poaceae bromus diandrus

poaceae austrostipa sp

poaceae hordeum leporinum

poaceae neurachne alopecuroi

poaceae bromus rubens

poaceae aira cupaniana

poaceae vulpia bromoides

poaceae rytidosperma caespitosu

poaceae austrostipa macalpinei

poaceae austrostipa elegantiss

poaceae bromus sp

poaceae rostraria pumila

poaceae monachather paradoxus

poaceae avena barbata

poaceae aristida contorta

poaceae lolium perenne

poaceae ehrharta longiflora

poaceae vulpia myuros

poaceae lamarckia aurea

poaceae pentameris airoides

polygonace emex australis

portulacac calandrinia eremaea

portulacac calandrinia granulifer

portulacac calandrinia corrigiolo

primulacea lysimachia arvensis

proteaceae grevillea paniculata

pteridacea cheilanthes austrotenu

santalacea santalum spicatum

scrophular zaluzianskya divaricata

solanaceae nicotiana rotundifol

stylidiace levenhookia leptantha

stylidiace levenhookia dubia

thymelaeac pimelea imbricata

urticaceae parietaria cardiosteg

xanthorrho bulbine semibarbat

xanthorrho caesia micrantha

xanthorrho dianella revoluta

zygophylla zygophyllum iodocarpum

sqlite> SELECT f.family, g.genus, s.species, i.invasive, h.habit, lf.life\_form

...> FROM family f, genus g, species s, invasive i, habit h, life\_form lf

...> WHERE s.family = f.family\_id

...> AND s.genus = g.genus\_id

...> AND s.invasive = i.invasive\_id

...> AND s.habit = h.habit\_id

...> AND s.life\_form = lf.life\_form\_id;

family genus species invasive habit life\_form

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aizoaceae mesembryanthemum nodiflorum exotic graminoid perennial

aizoaceae mesembryanthemum crystallin exotic forb annual

amaranthac ptilotus declinatus native forb annual

amaranthac ptilotus drummondii native forb annual

amaranthac ptilotus polystachy native forb annual

amaranthac enchylaena tomentosa native shrub perennial

amaranthac ptilotus holoserice native forb annual

amaranthac ptilotus gaudichaud native forb annual

amaranthac ptilotus exaltatus native forb annual

amaranthac ptilotus sp native shrub perennial

amaranthac ptilotus spathulatu native forb annual

amaranthac atriplex sp native forb annual

apiaceae daucus glochidiat native forb annual

apocynacea rhyncharrhena linearis native forb annual

araliaceae trachymene pilosa native forb annual

araliaceae hydrocotyle pilifera native forb annual

araliaceae trachymene cyanopetal native forb annual

araliaceae trachymene ornata native forb annual

asparagace lomandra effusa native forb annual

asparagace arthropodium curvipes native forb annual

asparagace thysanotus rectanther native forb annual

asparagace arthropodium dyeri native forb annual

asparagace dichopogon capillipes native forb annual

asparagace chamaescilla versicolor native graminoid perennial

asparagace thysanotus manglesian native forb annual

boraginace echium plantagine exotic forb annual

boryaceae borya sphaerocep native forb perennial

brassicace lepidium bonariense exotic forb+tuber perennial

brassicace menkea sphaerocar native graminoid perennial

brassicace brassica tournefort exotic forb annual

brassicace rapistrum rugosum exotic forb annual

brassicace stenopetalum lineare native forb annual

brassicace carrichtera annua exotic forb annual

campanulac lobelia gibbosa native forb annual

campanulac wahlenbergia gracilenta native forb annual

campanulac wahlenbergia capensis exotic graminoid annual

caryophyll petrorhagia dubia exotic forb annual

caryophyll polycarpon tetraphyll exotic forb+tuber perennial

caryophyll silene nocturna exotic forb annual

celastrace stackhousia monogyna native forb annual

centrolepi centrolepis aristata native forb annual

centrolepi centrolepis sp native forb annual

centrolepi centrolepis drummondia native forb annual

centrolepi centrolepis sp2 native forb annual

colchicace wurmbea drummondii native forb+tuber perennial

colchicace burchardia congesta native forb annual

colchicace wurmbea densiflora native graminoid perennial

colchicace wurmbea spPaynes.F native forb+rhizo perennial

compositae actinobole uliginosum native forb annual

compositae blennospora drummondii native forb annual

compositae angianthus tomentosus native forb annual

compositae arctotheca calendula exotic forb annual

compositae hyalosperma glutinosum native forb annual

compositae podolepis capillaris native twiner annual

compositae chthonocephalus pseudevax native shrub perennial

compositae cotula bipinnata exotic forb annual

compositae podotheca angustifol native forb perennial

compositae podotheca gnaphalioi native forb annual

compositae pogonolepis muellerian native forb annual

compositae lawrencella rosea native graminoid annual

compositae lawrencella davenporti native forb annual

compositae bellida graminea native graminoid perennial

compositae erymophyllum ramosum native forb annual

compositae urospermum picroides exotic forb annual

compositae brachyscome iberidifol native forb annual

compositae brachyscome perpusilla native forb annual

compositae brachyscome ciliaris native forb annual

compositae rhodanthe manglesii native forb annual

compositae hypochaeris glabra exotic forb annual

compositae calocephalus multifloru native forb+cormo perennial

compositae quinetia urvillei native graminoid annual

compositae waitzia acuminata native forb annual

compositae rhodanthe pygmaea native forb annual

compositae millotia myosotidif native forb annual

compositae millotia tenuifolia native forb annual

compositae senecio glossanthu native shrub perennial

compositae monoculus monstrosus exotic forb annual

compositae gilberta tenuifolia native forb annual

compositae gilruthia osbornei native forb annual

compositae gnephosis tenuissima native forb annual

compositae myriocephalus guerinae native forb annual

compositae rhodanthe polycephal native forb annual

compositae isoetopsis graminifol native forb annual

compositae calotis hispidula native forb annual

compositae calotis multicauli native forb annual

compositae rhodanthe spicata native forb annual

compositae schoenia cassiniana native graminoid perennial

compositae hedypnois rhagadiolo exotic forb annual

compositae rhodanthe citrina native forb perennial

compositae sonchus oleraceus exotic forb annual

compositae cephalipterum drummondii native forb annual

compositae ceratogyne obionoides native graminoid annual

compositae rhodanthe maryonii native graminoid annual

compositae hyalosperma demissum native forb annual

compositae hyalosperma glutinosum native forb annual

compositae podolepis lessonii native forb annual

compositae podolepis canescens native forb annual

compositae rhodanthe laevis native forb annual

compositae waitzia nitida native graminoid annual

compositae rhodanthe chloroceph native forb annual

compositae rhodanthe humboldtia native forb annual

compositae ursinia anthemoide exotic twiner perennial

crassulace crassula closiana native forb annual

crassulace crassula colorata native forb annual

cyperaceae schoenus nanus native forb perennial

dilleniace hibbertia glomerosa native graminoid perennial

droseracea drosera erythrorhi native forb+tuber perennial

droseracea drosera macrantha native shrub perennial

droseracea drosera glandulige native graminoid perennial

euphorbiac euphorbia drummondii native forb annual

geraniacea erodium aureum exotic forb annual

geraniacea erodium cygnorum native forb annual

geraniacea erodium botrys exotic forb annual

geraniacea erodium cicutarium exotic shrub perennial

goodeniace dampiera lavandulac native forb annual

goodeniace goodenia krauseana native forb annual

goodeniace brunonia australis native forb annual

goodeniace velleia rosea native graminoid perennial

goodeniace velleia cycnopotam native forb annual

goodeniace goodenia occidental native forb annual

goodeniace goodenia berardiana native forb annual

goodeniace goodenia pusilliflo native forb annual

haloragace haloragis odontocarp native forb annual

haloragace gonocarpus nodulosus native graminoid annual

iridaceae moraea setifolia exotic graminoid annual

iridaceae moraea flaccida exotic shrub perennial

iridaceae romulea rosea exotic forb perennial

juncaceae juncus bufonius exotic graminoid annual

juncaginac triglochin isingiana native forb annual

leguminosa trifolium hirtum exotic forb annual

leguminosa trifolium subterrane exotic forb annual

leguminosa medicago polymorpha exotic graminoid annual

leguminosa isotropis juncea native forb annual

leguminosa medicago minima exotic forb annual

leguminosa trifolium glomeratum exotic forb+tuber perennial

loganiacea phyllangium sulcatum native forb annual

malvaceae sida sp native forb annual

ophiogloss ophioglossum lusitanicu native forb annual

orchidacea cyanicula amplexans native forb+cormo perennial

orchidacea cyanicula gemmata native forb+tuber perennial

orchidacea caladenia sp native graminoid perennial

orchidacea pheladenia deformis native forb+tuber perennial

orchidacea prasophyllum gracile native forb annual

orchidacea caladenia roei native graminoid perennial

orchidacea caladenia denticulat native forb+tuber perennial

orobanchac parentucellia latifolia exotic forb annual

oxalidacea oxalis perennans native shrub perennial

phyllantha poranthera microphyll native graminoid annual

plantagina plantago debilis native forb annual

plantagina plantago coronopus exotic shrub perennial

poaceae briza maxima exotic forb perennial

poaceae austrostipa sp3 native forb annual

poaceae bromus diandrus exotic graminoid perennial

poaceae austrostipa sp native graminoid annual

poaceae hordeum leporinum exotic forb annual

poaceae neurachne alopecuroi native forb annual

poaceae bromus rubens exotic graminoid annual

poaceae aira cupaniana exotic forb annual

poaceae vulpia bromoides exotic forb annual

poaceae rytidosperma caespitosu native graminoid perennial

poaceae austrostipa macalpinei native graminoid perennial

poaceae austrostipa elegantiss native graminoid perennial

poaceae bromus sp exotic graminoid annual

poaceae rostraria pumila exotic forb annual

poaceae monachather paradoxus native forb annual

poaceae avena barbata exotic forb annual

poaceae aristida contorta native graminoid annual

poaceae lolium perenne exotic graminoid annual

poaceae ehrharta longiflora exotic forb annual

poaceae vulpia myuros exotic graminoid annual

poaceae lamarckia aurea exotic forb annual

poaceae pentameris airoides exotic graminoid annual

polygonace emex australis exotic graminoid perennial

portulacac calandrinia eremaea native forb annual

portulacac calandrinia granulifer native forb annual

portulacac calandrinia corrigiolo native forb annual

primulacea lysimachia arvensis exotic graminoid annual

proteaceae grevillea paniculata native shrub perennial

pteridacea cheilanthes austrotenu native forb annual

santalacea santalum spicatum native forb annual

scrophular zaluzianskya divaricata exotic forb annual

solanaceae nicotiana rotundifol native forb annual

stylidiace levenhookia leptantha native forb annual

stylidiace levenhookia dubia native forb annual

thymelaeac pimelea imbricata native graminoid annual

urticaceae parietaria cardiosteg native forb annual

xanthorrho bulbine semibarbat native forb annual

xanthorrho caesia micrantha native graminoid annual

xanthorrho dianella revoluta native forb annual

zygophylla zygophyllum iodocarpum exotic forb annual

sqlite> SELECT f.family, g.genus, s.species, i.invasive, h.habit, lf.life\_form

...> FROM family f, genus g, species s, invasive i, habit h, life\_form lf

...> WHERE s.family = f.family\_id

...> AND s.genus = g.genus\_id

...> AND s.invasive = i.invasive\_id

...> AND s.habit = h.habit\_id

...> AND s.life\_form = lf.life\_form\_id

...> ORDER BY s.genus;

family genus species invasive habit life\_form

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compositae arctotheca calendula exotic forb annual

poaceae austrostip sp3 native forb annual

poaceae austrostip sp native graminoid annual

poaceae austrostip macalpinei native graminoid perennial

poaceae austrostip elegantiss native graminoid perennial

poaceae bromus diandrus exotic graminoid perennial

poaceae bromus rubens exotic graminoid annual

poaceae bromus sp exotic graminoid annual

crassulace crassula closiana native forb annual

crassulace crassula colorata native forb annual

amaranthac enchylaena tomentosa native shrub perennial

compositae hypochaeri glabra exotic forb annual

poaceae lolium perenne exotic graminoid annual

poaceae pentameris airoides exotic graminoid annual

compositae actinobole uliginosum native forb annual

poaceae aristida contorta native graminoid annual

portulacac calandrini eremaea native forb annual

portulacac calandrini granulifer native forb annual

portulacac calandrini corrigiolo native forb annual

geraniacea erodium aureum exotic forb annual

geraniacea erodium cygnorum native forb annual

geraniacea erodium botrys exotic forb annual

geraniacea erodium cicutarium exotic shrub perennial

compositae hyalosperm glutinosum native forb annual

compositae hyalosperm demissum native forb annual

compositae hyalosperm glutinosum native forb annual

compositae podolepis capillaris native twiner annual

compositae podolepis lessonii native forb annual

compositae podolepis canescens native forb annual

compositae rhodanthe manglesii native forb annual

compositae rhodanthe pygmaea native forb annual

compositae rhodanthe polycephal native forb annual

compositae rhodanthe spicata native forb annual

compositae rhodanthe citrina native forb perennial

compositae rhodanthe maryonii native graminoid annual

compositae rhodanthe laevis native forb annual

compositae rhodanthe chloroceph native forb annual

compositae rhodanthe humboldtia native forb annual

compositae waitzia acuminata native forb annual

compositae waitzia nitida native graminoid annual

amaranthac ptilotus declinatus native forb annual

amaranthac ptilotus drummondii native forb annual

amaranthac ptilotus polystachy native forb annual

amaranthac ptilotus holoserice native forb annual

amaranthac ptilotus gaudichaud native forb annual

amaranthac ptilotus exaltatus native forb annual

amaranthac ptilotus sp native shrub perennial

amaranthac ptilotus spathulatu native forb annual

compositae blennospor drummondii native forb annual

juncaceae juncus bufonius exotic graminoid annual

poaceae vulpia bromoides exotic forb annual

poaceae vulpia myuros exotic graminoid annual

goodeniace velleia rosea native graminoid perennial

goodeniace velleia cycnopotam native forb annual

araliaceae trachymene pilosa native forb annual

araliaceae trachymene cyanopetal native forb annual

araliaceae trachymene ornata native forb annual

boryaceae borya sphaerocep native forb perennial

xanthorrho caesia micrantha native graminoid annual

poaceae avena barbata exotic forb annual

brassicace brassica tournefort exotic forb annual

xanthorrho bulbine semibarbat native forb annual

compositae monoculus monstrosus exotic forb annual

compositae sonchus oleraceus exotic forb annual

compositae brachyscom iberidifol native forb annual

compositae brachyscom perpusilla native forb annual

compositae brachyscom ciliaris native forb annual

poaceae ehrharta longiflora exotic forb annual

compositae millotia myosotidif native forb annual

compositae millotia tenuifolia native forb annual

compositae pogonolepi muellerian native forb annual

compositae cephalipte drummondii native forb annual

plantagina plantago debilis native forb annual

plantagina plantago coronopus exotic shrub perennial

compositae calotis hispidula native forb annual

compositae calotis multicauli native forb annual

caryophyll petrorhagi dubia exotic forb annual

araliaceae hydrocotyl pilifera native forb annual

leguminosa medicago polymorpha exotic graminoid annual

leguminosa medicago minima exotic forb annual

compositae senecio glossanthu native shrub perennial

amaranthac atriplex sp native forb annual

goodeniace goodenia krauseana native forb annual

goodeniace goodenia occidental native forb annual

goodeniace goodenia berardiana native forb annual

goodeniace goodenia pusilliflo native forb annual

colchicace burchardia congesta native forb annual

pteridacea cheilanthe austrotenu native forb annual

compositae gnephosis tenuissima native forb annual

compositae ursinia anthemoide exotic twiner perennial

asparagace dichopogon capillipes native forb annual

compositae lawrencell rosea native graminoid annual

compositae lawrencell davenporti native forb annual

compositae podotheca angustifol native forb perennial

compositae podotheca gnaphalioi native forb annual

apocynacea rhyncharrh linearis native forb annual

juncaginac triglochin isingiana native forb annual

zygophylla zygophyllu iodocarpum exotic forb annual

compositae angianthus tomentosus native forb annual

poaceae hordeum leporinum exotic forb annual

leguminosa trifolium hirtum exotic forb annual

leguminosa trifolium subterrane exotic forb annual

leguminosa trifolium glomeratum exotic forb+tuber perennial

aizoaceae mesembryan nodiflorum exotic graminoid perennial

aizoaceae mesembryan crystallin exotic forb annual

caryophyll silene nocturna exotic forb annual

poaceae rostraria pumila exotic forb annual

apiaceae daucus glochidiat native forb annual

poaceae lamarckia aurea exotic forb annual

haloragace haloragis odontocarp native forb annual

compositae gilberta tenuifolia native forb annual

compositae schoenia cassiniana native graminoid perennial

compositae ceratogyne obionoides native graminoid annual

brassicace stenopetal lineare native forb annual

poaceae monachathe paradoxus native forb annual

asparagace arthropodi curvipes native forb annual

asparagace arthropodi dyeri native forb annual

scrophular zaluziansk divaricata exotic forb annual

boraginace echium plantagine exotic forb annual

compositae urospermum picroides exotic forb annual

compositae erymophyll ramosum native forb annual

brassicace carrichter annua exotic forb annual

compositae isoetopsis graminifol native forb annual

haloragace gonocarpus nodulosus native graminoid annual

malvaceae sida sp native forb annual

loganiacea phyllangiu sulcatum native forb annual

poaceae aira cupaniana exotic forb annual

poaceae briza maxima exotic forb perennial

compositae hedypnois rhagadiolo exotic forb annual

orobanchac parentucel latifolia exotic forb annual

euphorbiac euphorbia drummondii native forb annual

campanulac wahlenberg gracilenta native forb annual

campanulac wahlenberg capensis exotic graminoid annual

iridaceae moraea setifolia exotic graminoid annual

iridaceae moraea flaccida exotic shrub perennial

poaceae rytidosper caespitosu native graminoid perennial

campanulac lobelia gibbosa native forb annual

cyperaceae schoenus nanus native forb perennial

poaceae neurachne alopecuroi native forb annual

compositae quinetia urvillei native graminoid annual

celastrace stackhousi monogyna native forb annual

orchidacea prasophyll gracile native forb annual

asparagace thysanotus rectanther native forb annual

asparagace thysanotus manglesian native forb annual

phyllantha poranthera microphyll native graminoid annual

solanaceae nicotiana rotundifol native forb annual

centrolepi centrolepi aristata native forb annual

centrolepi centrolepi sp native forb annual

centrolepi centrolepi drummondia native forb annual

centrolepi centrolepi sp2 native forb annual

primulacea lysimachia arvensis exotic graminoid annual

oxalidacea oxalis perennans native shrub perennial

thymelaeac pimelea imbricata native graminoid annual

droseracea drosera erythrorhi native forb+tuber perennial

droseracea drosera macrantha native shrub perennial

droseracea drosera glandulige native graminoid perennial

stylidiace levenhooki leptantha native forb annual

stylidiace levenhooki dubia native forb annual

goodeniace dampiera lavandulac native forb annual

brassicace rapistrum rugosum exotic forb annual

urticaceae parietaria cardiosteg native forb annual

santalacea santalum spicatum native forb annual

asparagace lomandra effusa native forb annual

ophiogloss ophiogloss lusitanicu native forb annual

compositae chthonocep pseudevax native shrub perennial

orchidacea caladenia sp native graminoid perennial

orchidacea caladenia roei native graminoid perennial

orchidacea caladenia denticulat native forb+tuber perennial

compositae bellida graminea native graminoid perennial

compositae gilruthia osbornei native forb annual

brassicace menkea sphaerocar native graminoid perennial

colchicace wurmbea drummondii native forb+tuber perennial

colchicace wurmbea densiflora native graminoid perennial

colchicace wurmbea spPaynes.F native forb+rhizo perennial

compositae myriocepha guerinae native forb annual

polygonace emex australis exotic graminoid perennial

proteaceae grevillea paniculata native shrub perennial

iridaceae romulea rosea exotic forb perennial

xanthorrho dianella revoluta native forb annual

asparagace chamaescil versicolor native graminoid perennial

goodeniace brunonia australis native forb annual

compositae cotula bipinnata exotic forb annual

dilleniace hibbertia glomerosa native graminoid perennial

leguminosa isotropis juncea native forb annual

orchidacea pheladenia deformis native forb+tuber perennial

orchidacea cyanicula amplexans native forb+cormo perennial

orchidacea cyanicula gemmata native forb+tuber perennial

brassicace lepidium bonariense exotic forb+tuber perennial

compositae calocephal multifloru native forb+cormo perennial

caryophyll polycarpon tetraphyll exotic forb+tuber perennial

sqlite>

[Restored 3 Aug 2017, 11:36:55 AM]

Last login: Thu Aug 3 09:29:46 on console

Restored session: Mon 31 Jul 2017 15:48:15 AEST

margiemayfield@biol-3hugg7l:~/Google Drive/FunctionalTraitDatabase/test\_trait\_database$

[Restored 4 Aug 2017, 9:19:34 AM]

Last login: Fri Aug 4 08:46:52 on console

Restored session: Thu 3 Aug 2017 15:40:23 AEST

margiemayfield@biol-3hugg7l:~/Google Drive/FunctionalTraitDatabase/test\_trait\_database$ sqlite3 test\_trait.db

SQLite version 3.8.10.2 2015-05-20 18:17:19

Enter ".help" for usage hints.

sqlite> .tables

family habit plot species

field\_season invasive projects trait\_summary

genus life\_form site treatment

sqlite> SELECT family.family, genus.genus, species, invasive.invasive, habit.habit, life\_form.life\_form FROM species

...> JOIN family ON species.family = family.family\_id

...> JOIN genus ON species.genus = genus.genus\_id

...> JOIN invasive ON species.invasive = invasive.invasive\_id

...> JOIN habit ON species.habit = habit.habit\_id

...> JOIN life\_form ON species.life\_form = life\_form.life\_form\_id

...> LIMIT 20;

aizoaceae|mesembryanthemum|nodiflorum|exotic|graminoid|perennial

aizoaceae|mesembryanthemum|crystallinum|exotic|forb|annual

amaranthaceae|ptilotus|declinatus|native|forb|annual

amaranthaceae|ptilotus|drummondii|native|forb|annual

amaranthaceae|ptilotus|polystachyus|native|forb|annual

amaranthaceae|enchylaena|tomentosa|native|shrub|perennial

amaranthaceae|ptilotus|holosericeus|native|forb|annual

amaranthaceae|ptilotus|gaudichaudii|native|forb|annual

amaranthaceae|ptilotus|exaltatus|native|forb|annual

amaranthaceae|ptilotus|sp|native|shrub|perennial

amaranthaceae|ptilotus|spathulatus|native|forb|annual

amaranthaceae|atriplex|sp|native|forb|annual

apiaceae|daucus|glochidiatus|native|forb|annual

apocynaceae|rhyncharrhena|linearis|native|forb|annual

araliaceae|trachymene|pilosa|native|forb|annual

araliaceae|hydrocotyle|pilifera|native|forb|annual

araliaceae|trachymene|cyanopetala|native|forb|annual

araliaceae|trachymene|ornata|native|forb|annual

asparagaceae|lomandra|effusa|native|forb|annual

asparagaceae|arthropodium|curvipes|native|forb|annual

sqlite> .mode columns

sqlite> .headers on

sqlite> SELECT family.family, genus.genus, species, invasive.invasive, habit.habit, life\_form.life\_form FROM species

...> JOIN family ON species.family = family.family\_id

...> JOIN genus ON species.genus = genus.genus\_id

...> JOIN invasive ON species.invasive = invasive.invasive\_id

...> JOIN habit ON species.habit = habit.habit\_id

...> JOIN life\_form ON species.life\_form = life\_form.life\_form\_id

...> LIMIT 20;

family genus species invasive habit life\_form

---------- ---------------- ---------- ---------- ---------- ----------

aizoaceae mesembryanthemum nodiflorum exotic graminoid perennial

aizoaceae mesembryanthemum crystallin exotic forb annual

amaranthac ptilotus declinatus native forb annual

amaranthac ptilotus drummondii native forb annual

amaranthac ptilotus polystachy native forb annual

amaranthac enchylaena tomentosa native shrub perennial

amaranthac ptilotus holoserice native forb annual

amaranthac ptilotus gaudichaud native forb annual

amaranthac ptilotus exaltatus native forb annual

amaranthac ptilotus sp native shrub perennial

amaranthac ptilotus spathulatu native forb annual

amaranthac atriplex sp native forb annual

apiaceae daucus glochidiat native forb annual

apocynacea rhyncharrhena linearis native forb annual

araliaceae trachymene pilosa native forb annual

araliaceae hydrocotyle pilifera native forb annual

araliaceae trachymene cyanopetal native forb annual

araliaceae trachymene ornata native forb annual

asparagace lomandra effusa native forb annual

asparagace arthropodium curvipes native forb annual

sqlite> SELECT family.family, genus.genus, species, invasive.invasive, habit.habit, life\_form.life\_form FROM species

...> JOIN family ON species.family = family.family\_id

...> JOIN genus ON species.genus = genus.genus\_id

...> JOIN invasive ON species.invasive = invasive.invasive\_id

...> JOIN habit ON species.habit = habit.habit\_id

...> JOIN life\_form ON species.life\_form = life\_form.life\_form\_id

...> WHERE habit == forb

...> LIMIT 20;

Error: ambiguous column name: habit

sqlite> SELECT family.family, genus.genus, species, invasive.invasive, habit.habit, life\_form.life\_form FROM species

...> JOIN family ON species.family = family.family\_id

...> JOIN genus ON species.genus = genus.genus\_id

...> JOIN invasive ON species.invasive = invasive.invasive\_id

...> JOIN habit ON species.habit = habit.habit\_id

...> JOIN life\_form ON species.life\_form = life\_form.life\_form\_id

...> WHERE habit.habit == forb

...> LIMIT 20;

Error: no such column: forb

sqlite> SELECT family.family, genus.genus, species, invasive.invasive, habit.habit, life\_form.life\_form FROM species

...> JOIN family ON species.family = family.family\_id

...> JOIN genus ON species.genus = genus.genus\_id

...> JOIN invasive ON species.invasive = invasive.invasive\_id

...> JOIN habit ON species.habit = habit.habit\_id

...> JOIN life\_form ON species.life\_form = life\_form.life\_form\_id

...> WHERE habit.habit == "forb"

...> LIMIT 20;

family genus species invasive habit life\_form

---------- ---------------- ------------ ---------- ---------- ----------

aizoaceae mesembryanthemum crystallinum exotic forb annual

amaranthac ptilotus declinatus native forb annual

amaranthac ptilotus drummondii native forb annual

amaranthac ptilotus polystachyus native forb annual

amaranthac ptilotus holosericeus native forb annual

amaranthac ptilotus gaudichaudii native forb annual

amaranthac ptilotus exaltatus native forb annual

amaranthac ptilotus spathulatus native forb annual

amaranthac atriplex sp native forb annual

apiaceae daucus glochidiatus native forb annual

apocynacea rhyncharrhena linearis native forb annual

araliaceae trachymene pilosa native forb annual

araliaceae hydrocotyle pilifera native forb annual

araliaceae trachymene cyanopetala native forb annual

araliaceae trachymene ornata native forb annual

asparagace lomandra effusa native forb annual

asparagace arthropodium curvipes native forb annual

asparagace thysanotus rectantherus native forb annual

asparagace arthropodium dyeri native forb annual

asparagace dichopogon capillipes native forb annual

sqlite> SELECT f.family, g.genus, s.species, i.invasive, h.habit, lf.life\_form

...> FROM family f, genus g, species s, invasive i, habit h, life\_form lf

...> JOIN family ON s.family = f.family\_id

...> JOIN genus ON s.genus = g.genus\_id

...> JOIN invasive ON s.invasive = i.invasive\_id

...> JOIN habit ON s.habit = h.habit\_id

...> JOIN life\_form ON s.life\_form = lf.life\_form\_id

...> WHERE h.habit == "forb"

...> LIMIT 20;

family genus species invasive habit life\_form

---------- ---------------- ------------ ---------- ---------- ----------

aizoaceae mesembryanthemum crystallinum exotic forb annual

aizoaceae mesembryanthemum crystallinum exotic forb annual

aizoaceae mesembryanthemum crystallinum exotic forb annual

aizoaceae mesembryanthemum crystallinum exotic forb annual

aizoaceae mesembryanthemum crystallinum exotic forb annual

aizoaceae mesembryanthemum crystallinum exotic forb annual

aizoaceae mesembryanthemum crystallinum exotic forb annual

aizoaceae mesembryanthemum crystallinum exotic forb annual

aizoaceae mesembryanthemum crystallinum exotic forb annual

aizoaceae mesembryanthemum crystallinum exotic forb annual

aizoaceae mesembryanthemum crystallinum exotic forb annual

aizoaceae mesembryanthemum crystallinum exotic forb annual

aizoaceae mesembryanthemum crystallinum exotic forb annual

aizoaceae mesembryanthemum crystallinum exotic forb annual

aizoaceae mesembryanthemum crystallinum exotic forb annual

aizoaceae mesembryanthemum crystallinum exotic forb annual

aizoaceae mesembryanthemum crystallinum exotic forb annual

aizoaceae mesembryanthemum crystallinum exotic forb annual

aizoaceae mesembryanthemum crystallinum exotic forb annual

aizoaceae mesembryanthemum crystallinum exotic forb annual

sqlite> SELECT family.family, genus.genus, species, invasive.invasive, habit.habit, life\_form.life\_form FROM species

...> JOIN family ON species.family = family.family\_id

...> JOIN genus ON species.genus = genus.genus\_id

...> JOIN invasive ON species.invasive = invasive.invasive\_id

...> JOIN habit ON species.habit = habit.habit\_id

...> JOIN life\_form ON species.life\_form = life\_form.life\_form\_id

...> WHERE habit.habit == "forb"

...> LIMIT 20;

family genus species invasive habit life\_form

---------- ---------------- ------------ ---------- ---------- ----------

aizoaceae mesembryanthemum crystallinum exotic forb annual

amaranthac ptilotus declinatus native forb annual

amaranthac ptilotus drummondii native forb annual

amaranthac ptilotus polystachyus native forb annual

amaranthac ptilotus holosericeus native forb annual

amaranthac ptilotus gaudichaudii native forb annual

amaranthac ptilotus exaltatus native forb annual

amaranthac ptilotus spathulatus native forb annual

amaranthac atriplex sp native forb annual

apiaceae daucus glochidiatus native forb annual

apocynacea rhyncharrhena linearis native forb annual

araliaceae trachymene pilosa native forb annual

araliaceae hydrocotyle pilifera native forb annual

araliaceae trachymene cyanopetala native forb annual

araliaceae trachymene ornata native forb annual

asparagace lomandra effusa native forb annual

asparagace arthropodium curvipes native forb annual

asparagace thysanotus rectantherus native forb annual

asparagace arthropodium dyeri native forb annual

asparagace dichopogon capillipes native forb annual

sqlite> SELECT family.family, genus.genus, species, invasive.invasive, habit.habit, life\_form.life\_form FROM species s

...> JOIN family ON s.family = family.family\_id

...> JOIN genus ON s.genus = genus.genus\_id

...> JOIN invasive ON s.invasive = invasive.invasive\_id

...> JOIN habit ON s.habit = habit.habit\_id

...> JOIN life\_form ON s.life\_form = life\_form.life\_form\_id

...> WHERE habit.habit == "forb" --speciffy conditions for certain columns

...> LIMIT 20 ; -- specify how many you want to see

family genus species invasive habit life\_form

---------- ---------------- ------------ ---------- ---------- ----------

aizoaceae mesembryanthemum crystallinum exotic forb annual

amaranthac ptilotus declinatus native forb annual

amaranthac ptilotus drummondii native forb annual

amaranthac ptilotus polystachyus native forb annual

amaranthac ptilotus holosericeus native forb annual

amaranthac ptilotus gaudichaudii native forb annual

amaranthac ptilotus exaltatus native forb annual

amaranthac ptilotus spathulatus native forb annual

amaranthac atriplex sp native forb annual

apiaceae daucus glochidiatus native forb annual

apocynacea rhyncharrhena linearis native forb annual

araliaceae trachymene pilosa native forb annual

araliaceae hydrocotyle pilifera native forb annual

araliaceae trachymene cyanopetala native forb annual

araliaceae trachymene ornata native forb annual

asparagace lomandra effusa native forb annual

asparagace arthropodium curvipes native forb annual

asparagace thysanotus rectantherus native forb annual

asparagace arthropodium dyeri native forb annual

asparagace dichopogon capillipes native forb annual

sqlite> SELECT f.family, g.genus, s.species

...> FROM family f, genus g, species s

...> WHERE s.genus = g.genus\_id

...> AND s.family = f.family\_id

...> GROUPBY family;

Error: near "GROUPBY": syntax error

sqlite> SELECT f.family, g.genus, s.species

...> FROM family f, genus g, species s

...> WHERE s.genus = g.genus\_id

...> AND s.family = f.family\_id

...> GROUP BY family;

Error: ambiguous column name: family

sqlite> SELECT f.family, g.genus, s.species

...> FROM family f, genus g, species s

...> WHERE s.genus = g.genus\_id

...> AND s.family = f.family\_id

...> GROUP BY f.family;

family genus species

---------- ---------------- ------------

aizoaceae mesembryanthemum crystallinum

amaranthac atriplex sp

apiaceae daucus glochidiatus

apocynacea rhyncharrhena linearis

araliaceae trachymene ornata

asparagace thysanotus manglesianus

boraginace echium plantagineum

boryaceae borya sphaerocepha

brassicace carrichtera annua

campanulac wahlenbergia capensis

caryophyll silene nocturna

celastrace stackhousia monogyna

centrolepi centrolepis sp2

colchicace wurmbea spPaynes.Fin

compositae ursinia anthemoides

crassulace crassula colorata

cyperaceae schoenus nanus

dilleniace hibbertia glomerosa

droseracea drosera glanduligera

euphorbiac euphorbia drummondii

geraniacea erodium cicutarium

goodeniace goodenia pusilliflora

haloragace gonocarpus nodulosus

iridaceae romulea rosea

juncaceae juncus bufonius

juncaginac triglochin isingiana

leguminosa trifolium glomeratum

loganiacea phyllangium sulcatum

malvaceae sida sp

ophiogloss ophioglossum lusitanicum

orchidacea caladenia denticulata

orobanchac parentucellia latifolia

oxalidacea oxalis perennans

phyllantha poranthera microphylla

plantagina plantago coronopus

poaceae pentameris airoides

polygonace emex australis

portulacac calandrinia corrigioloid

primulacea lysimachia arvensis

proteaceae grevillea paniculata

pteridacea cheilanthes austrotenuif

santalacea santalum spicatum

scrophular zaluzianskya divaricata

solanaceae nicotiana rotundifolia

stylidiace levenhookia dubia

thymelaeac pimelea imbricata

urticaceae parietaria cardiostegia

xanthorrho dianella revoluta

zygophylla zygophyllum iodocarpum

sqlite> SELECT f.family, g.genus, s.species, count(f.family)

...> FROM family f, genus g, species s

...> WHERE s.genus = g.genus\_id

...> AND s.family = f.family\_id

...> GROUP BY f.family;

family genus species count(f.family)

---------- ---------------- ------------ ---------------

aizoaceae mesembryanthemum crystallinum 2

amaranthac atriplex sp 10

apiaceae daucus glochidiatus 1

apocynacea rhyncharrhena linearis 1

araliaceae trachymene ornata 4

asparagace thysanotus manglesianus 7

boraginace echium plantagineum 1

boryaceae borya sphaerocepha 1

brassicace carrichtera annua 6

campanulac wahlenbergia capensis 3

caryophyll silene nocturna 3

celastrace stackhousia monogyna 1

centrolepi centrolepis sp2 4

colchicace wurmbea spPaynes.Fin 4

compositae ursinia anthemoides 54

crassulace crassula colorata 2

cyperaceae schoenus nanus 1

dilleniace hibbertia glomerosa 1

droseracea drosera glanduligera 3

euphorbiac euphorbia drummondii 1

geraniacea erodium cicutarium 4

goodeniace goodenia pusilliflora 8

haloragace gonocarpus nodulosus 2

iridaceae romulea rosea 3

juncaceae juncus bufonius 1

juncaginac triglochin isingiana 1

leguminosa trifolium glomeratum 6

loganiacea phyllangium sulcatum 1

malvaceae sida sp 1

ophiogloss ophioglossum lusitanicum 1

orchidacea caladenia denticulata 7

orobanchac parentucellia latifolia 1

oxalidacea oxalis perennans 1

phyllantha poranthera microphylla 1

plantagina plantago coronopus 2

poaceae pentameris airoides 22

polygonace emex australis 1

portulacac calandrinia corrigioloid 3

primulacea lysimachia arvensis 1

proteaceae grevillea paniculata 1

pteridacea cheilanthes austrotenuif 1

santalacea santalum spicatum 1

scrophular zaluzianskya divaricata 1

solanaceae nicotiana rotundifolia 1

stylidiace levenhookia dubia 2

thymelaeac pimelea imbricata 1

urticaceae parietaria cardiostegia 1

xanthorrho dianella revoluta 3

zygophylla zygophyllum iodocarpum 1

sqlite> SELECT f.family, g.genus, count(f.family)

...> FROM family f, genus g, species s

...> WHERE s.genus = g.genus\_id

...> AND s.family = f.family\_id

...> GROUP BY f.family;

family genus count(f.family)

---------- ---------------- ---------------

aizoaceae mesembryanthemum 2

amaranthac atriplex 10

apiaceae daucus 1

apocynacea rhyncharrhena 1

araliaceae trachymene 4

asparagace thysanotus 7

boraginace echium 1

boryaceae borya 1

brassicace carrichtera 6

campanulac wahlenbergia 3

caryophyll silene 3

celastrace stackhousia 1

centrolepi centrolepis 4

colchicace wurmbea 4

compositae ursinia 54

crassulace crassula 2

cyperaceae schoenus 1

dilleniace hibbertia 1

droseracea drosera 3

euphorbiac euphorbia 1

geraniacea erodium 4

goodeniace goodenia 8

haloragace gonocarpus 2

iridaceae romulea 3

juncaceae juncus 1

juncaginac triglochin 1

leguminosa trifolium 6

loganiacea phyllangium 1

malvaceae sida 1

ophiogloss ophioglossum 1

orchidacea caladenia 7

orobanchac parentucellia 1

oxalidacea oxalis 1

phyllantha poranthera 1

plantagina plantago 2

poaceae pentameris 22

polygonace emex 1

portulacac calandrinia 3

primulacea lysimachia 1

proteaceae grevillea 1

pteridacea cheilanthes 1

santalacea santalum 1

scrophular zaluzianskya 1

solanaceae nicotiana 1

stylidiace levenhookia 2

thymelaeac pimelea 1

urticaceae parietaria 1

xanthorrho dianella 3

zygophylla zygophyllum 1

sqlite> SELECT f.family, count(f.family)

...> FROM family f, genus g, species s

...> WHERE s.genus = g.genus\_id

...> AND s.family = f.family\_id

...> GROUP BY f.family;

family count(f.family)

---------- ---------------

aizoaceae 2

amaranthac 10

apiaceae 1

apocynacea 1

araliaceae 4

asparagace 7

boraginace 1

boryaceae 1

brassicace 6

campanulac 3

caryophyll 3

celastrace 1

centrolepi 4

colchicace 4

compositae 54

crassulace 2

cyperaceae 1

dilleniace 1

droseracea 3

euphorbiac 1

geraniacea 4

goodeniace 8

haloragace 2

iridaceae 3

juncaceae 1

juncaginac 1

leguminosa 6

loganiacea 1

malvaceae 1

ophiogloss 1

orchidacea 7

orobanchac 1

oxalidacea 1

phyllantha 1

plantagina 2

poaceae 22

polygonace 1

portulacac 3

primulacea 1

proteaceae 1

pteridacea 1

santalacea 1

scrophular 1

solanaceae 1

stylidiace 2

thymelaeac 1

urticaceae 1

xanthorrho 3

zygophylla 1

sqlite> SELECT family, count(family)

...> FROM family

...> GROUP BY family;

family count(family)

---------- -------------

aizoaceae 1

amaranthac 1

apiaceae 1

apocynacea 1

araliaceae 1

asparagace 1

boraginace 1

boryaceae 1

brassicace 1

campanulac 1

caryophyll 1

celastrace 1

centrolepi 1

colchicace 1

compositae 1

crassulace 1

cyperaceae 1

dilleniace 1

droseracea 1

euphorbiac 1

geraniacea 1

goodeniace 1

haloragace 1

iridaceae 1

juncaceae 1

juncaginac 1

leguminosa 1

loganiacea 1

malvaceae 1

ophiogloss 1

orchidacea 1

orobanchac 1

oxalidacea 1

phyllantha 1

plantagina 1

poaceae 1

polygonace 1

portulacac 1

primulacea 1

proteaceae 1

pteridacea 1

santalacea 1

scrophular 1

solanaceae 1

stylidiace 1

thymelaeac 1

urticaceae 1

xanthorrho 1

zygophylla 1

sqlite> .databases

seq name file

--- --------------- ----------------------------------------------------------

0 main /Users/margiemayfield/Google Drive/FunctionalTraitDatabase

sqlite>

[Restored 9 Aug 2017, 2:10:18 PM]

Last login: Wed Aug 9 09:39:03 on console

Restored session: Fri 4 Aug 2017 15:40:56 AEST

margiemayfield@biol-3hugg7l:~/Google Drive/FunctionalTraitDatabase/test\_trait\_database$ /Users/margiemayfield/Google\ Drive/Cath\ Honours\ 2017/convergence\_debugging/Honours.R

[Restored 17 Aug 2017, 9:50:37 AM]

Last login: Thu Aug 17 08:38:35 on console

margiemayfield@biol-3hugg7l:~/Google Drive/FunctionalTraitDatabase/test\_trait\_database$ /Users/margiemayfield/Google\ Drive/FunctionalTraitDatabase/Construction/projects /Users/margiemayfield/Google\ Drive/FunctionalTraitDatabase/Construction/final\_tables

[Restored 18 Aug 2017, 12:18:33 PM]

Last login: Fri Aug 18 08:32:45 on console

Restored session: Thu 17 Aug 2017 16:34:00 AEST

margiemayfield@biol-3hugg7l:~/Google Drive/FunctionalTraitDatabase/test\_trait\_database$ /Users/margiemayfield/Google\ Drive/FunctionalTraitDatabase/Construction/final\_tables/complete\_species.csv

[Restored 23 Aug 2017, 11:58:45 AM]

Last login: Wed Aug 23 08:30:20 on console

Restored session: Fri 18 Aug 2017 16:14:08 AEST

margiemayfield@biol-3hugg7l:~/Google Drive/FunctionalTraitDatabase/test\_trait\_database$ /Users/margiemayfield/Google\ Drive/Cath\ Honours\ 2017/Final\ R\ code\ /Flowercount.latest.fulldata.csv

[Restored 24 Aug 2017, 4:04:57 PM]

Last login: Thu Aug 24 08:42:57 on console

Restored session: Wed 23 Aug 2017 16:50:34 AEST

margiemayfield@biol-3hugg7l:~/Google Drive/FunctionalTraitDatabase/test\_trait\_database$ /Users/margiemayfield/Google\ Drive/Cath\ Honours\ 2017/Final\ R\ code\ /Cath\_Honours/Flowercount.latest.fulldata.csv

[Restored 20 Sep 2017, 1:52:44 PM]

Last login: Wed Sep 20 08:35:49 on console

margiemayfield@biol-3hugg7l:~/Google Drive/FunctionalTraitDatabase/test\_trait\_database$ /Users/margiemayfield/Google\ Drive/Gender\_Study\_2017/Analysis/gender\_pubs2.csv

[Restored 27 Oct 2017, 12:03:30 PM]

Last login: Fri Oct 27 08:32:16 on console

margiemayfield@biol-3hugg7l:~/Google Drive/FunctionalTraitDatabase/test\_trait\_database$ python3

Python 3.6.1 (v3.6.1:69c0db5050, Mar 21 2017, 01:21:04)

[GCC 4.2.1 (Apple Inc. build 5666) (dot 3)] on darwin

Type "help", "copyright", "credits" or "license" for more information.

>>>

KeyboardInterrupt

>>> exit

Use exit() or Ctrl-D (i.e. EOF) to exit

>>> ^D

margiemayfield@biol-3hugg7l:~/Google Drive/FunctionalTraitDatabase/test\_trait\_database$ ipython

-bash: ipython: command not found

margiemayfield@biol-3hugg7l:~/Google Drive/FunctionalTraitDatabase/test\_trait\_database$

[Restored 7 Dec 2017, 1:04:24 PM]

Last login: Thu Dec 7 08:33:20 on console

Restored session: Fri 27 Oct 2017 12:03:58 AEST

margiemayfield@biol-3hugg7l:~/Google Drive/FunctionalTraitDatabase/test\_trait\_database$ /Users/margiemayfield/Google\ Drive/Seed\ viability/Seed.Bag.Data.11.11.2017.CE.csv

[Restored 2 May 2018, 1:54:57 PM]

## cd /Users/margiemayfield/Google Drive/FunctionalTraitDatabase/test\_trait\_database ##

Last login: Tue Feb 20 18:44:22 on console

Restored session: Thu 7 Dec 2017 15:14:39 AEST

margiemayfield@biol-3hugg7l:~$