

QGIS Application - Bug report #19598

Weird QGIS behaviour when modifying a spatialite table

2018-08-11 10:05 AM - Christophe Damour

Status:	Closed	
Priority:	High	
Assignee:	Julien Cabieces	
Category:	Attribute table	
Affected QGIS version:	3.4.1	Regression?: No
Operating System:	Ubuntu 16.04	Easy fix?: No
Pull Request or Patch supplied:	No	Resolution:
Crashes QGIS or corrupts data:	No	Copied to github as #: 27425
Description I am trying to modify column names in a Spatialite table. To do that, I run the following SQL statements in the DB Manager : -- Rename existing table ALTER TABLE compteur_routier RENAME TO compteur_routier_sav; -- Create new table with modified column names CREATE TABLE compteur_routier (id INTEGER PRIMARY KEY, geom POINT, id_compt TEXT, type_compt TEXT, angle INTEGER, id_tmp INTEGER); -- Insert data from renamed table INSERT INTO compteur_routier(id, geom, id_compt, type_compt, angle, id_tmp) SELECT id, geom, id_compteur, type_compteur, angle, id_tmp FROM compteur_routier_sav; -- Drop renamed table DROP TABLE compteur_routier_sav; This works perfectly in the DB manager, column names are modified and datas are kept. However, when I load the resulting table in QGIS and open the attribute table, I get old column names and datas replaced by column names. Please have a look at screenshots and test db in attached files.		

History

#1 - 2018-08-31 03:02 PM - Christophe Damour

Also reproduced on Ubuntu 16.04

#2 - 2018-08-31 04:34 PM - Giovanni Manghi

- Operating System deleted (W10)

#3 - 2018-11-08 01:31 PM - Giovanni Manghi

- Status changed from Open to Feedback

Please try on QGIS 3.4.1, if the issue is still valid change the affected version, thanks.

#4 - 2018-11-10 06:28 PM - Christophe Damour

Problem still there in 3.4.1, but I can't modify the affected version...

Can you do that for me ?

Thanks,

#5 - 2018-11-12 01:29 PM - Giovanni Manghi

- Affected QGIS version changed from 3.2 to 3.4.1

- Status changed from Feedback to Open

#6 - 2019-01-09 04:21 PM - Julien Cabieces

- Assignee set to Julien Cabieces

It seems to be a problem in spatialite. I create a ticket : <https://www.gaia-gis.it/fossil/libspatialite/tktview/e8d83559fbc5d492ff1dff86e07751547b485430>

#7 - 2019-01-09 07:37 PM - Giovanni Manghi

Julien Cabieces wrote:

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should this be confirmed as a SL issue this ticket must be closed as "upstream".

#8 - 2019-01-11 07:23 AM - Mark Johnson

This is a user error, not a spatialite error.

As a general rule, the following should be considered true:

- **sqlite3** does not know, nor care, about administration TABLEs of any extension.

In this case the old **SpatialTable** was renamed using

- **ALTER TABLE compteur_routier RENAME TO compteur_routier_sav;**
- all entries in the administration TABLEs remained, including **vector_layers_field_infos** which contained the old column names
- a new **SpatialTable**, with the same name was incorrectly created (without **AddGeometryColumn**)
(this was not the cause of this problem, but never the less is incorrect)

The (closed) Spatialite Issue contains tips on how to deal with this correctly, using spatialite commands that deals with administration TABLEs properly.

#9 - 2019-01-11 09:57 AM - Julien Cabieces

- Status changed from Open to Closed

Thank you for the detailed answer and sorry for the useless spatialite ticket.

There is still a bug in QGIS because renaming a table is done wrong in db manager plugin (alter table instead of rename table). I close this issue because there is already another one on the subject #14239

#10 - 2019-01-11 10:14 AM - Christophe Damour

Thank you all for input on this problem.

I now know what I was doing wrong and look forward to being able to handle it from QGIS (and DB Manager plugin).

#11 - 2019-01-11 11:28 AM - Christophe Damour

Attempt to summarize what currently works in QGIS 3.4.1 using DB Manager Plugin (special thanks to Mark Johnson for the guidelines) :

```
-- Create a copy of the table with data
SELECT CloneTable('main', 'compteur_routier', 'compteur_routier_sav', 1);

-- Drop old table (administration tables will be adapted)
SELECT DropGeoTable('compteur_routier');

-- Create and fill new table from cloned table
-- Create new table with modified column names, WITHOUT geom column
CREATE TABLE compteur_routier (
id INTEGER PRIMARY KEY NOT NULL,
id_compt TEXT,
type_compt TEXT,
angle INTEGER,
id_tmp INTEGER
);

-- Add geom column
SELECT AddGeometryColumn('compteur_routier', 'geom', 2154, 'POINT', 'XY', 1);

-- Insert data from renamed table
INSERT INTO compteur_routier(id, geom, id_compt, type_compt, angle, id_tmp)
SELECT id, geom, id_compteur, type_compteur, angle, id_tmp FROM compteur_routier_sav;

-- Drop cloned table (administration tables will be adapted)
SELECT DropGeoTable('compteur_routier_sav'); -- QGIS 3.4.1
```

Note : DropGeoTable should be replaced by DropTable when Spatialite lib will be updated in QGIS.

#12 - 2019-01-11 12:13 PM - Mark Johnson

Add the following to round it off:

```
-- after AddGeometryColumn [SpatialIndex was removed with DropGeoTable]
SELECT CreateSpatialIndex('compteur_routier', 'geom');
-- after INSERT
```

```
SELECT UpdateLayerStatistics('compteur_routier', 'geom');
```

#13 - 2019-01-11 12:37 PM - Mark Johnson

For future reference:

When using the fossil version of Spatialite (5.0.0) together with SQLite >= 3.25.0

- **RenameTable** and **RenameColumn** can be used to complete this task

These commands will insure that all administration tasks will be completed correctly including the renaming/adapting of all TRIGGERS and VIEWS, for both 'Normal' and SpatialTables.

Preparations are in the last testing phase for support for GeoPackages and Gdal/Ogr-Fdo Databases.

Due to the historical development of SQLite, care must be taken to create VIEWS with proper field definitions (which are optional).

Full details and background information can be found here:

https://www.gaia-gis.it/gaia-sins/spatialite-cookbook-5/cookbook_topics.administration.html#topic_VIEW_to_SpatialView

Files

test_files.zip	445 KB	2018-08-11	Christophe Damour
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