

QGIS Application - Bug report #5035

stretching with nb of standard deviation: always min = max = 0

2012-02-16 04:06 AM - alobo -

<b>Status:</b>	Closed																																																		
<b>Priority:</b>	Normal																																																		
<b>Assignee:</b>																																																			
<b>Category:</b>	Rasters																																																		
<b>Affected QGIS version:</b>	master	<b>Regression?:</b> No																																																	
<b>Operating System:</b>	ubuntu 10.04	<b>Easy fix?:</b> No																																																	
<b>Pull Request or Patch supplied:</b>	No	<b>Resolution:</b>																																																	
<b>Crashes QGIS or corrupts data:</b>	No	<b>Copied to github as #:</b> 14808																																																	
<b>Description</b>																																																			
<p>I have an image for which selecting "Use standard deviation" always results into min and max equal to 0</p> <p>Is this perhaps because it is float 32 or because of some negative values?</p> <p>According to R, the actual summaries for each band are:</p> <table><tr><td></td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td></tr><tr><td>Min.</td><td>-3.00</td><td>-3.00</td><td>-3.0</td><td>-3.00</td><td>-3.00</td><td>-3.00</td></tr><tr><td>1st Qu.</td><td>67.00</td><td>3.00</td><td>3.0</td><td>4.00</td><td>10.00</td><td>16.00</td></tr><tr><td>Median</td><td>84.00</td><td>4.00</td><td>4.0</td><td>4.00</td><td>17.00</td><td>24.00</td></tr><tr><td>Mean</td><td>79.78</td><td>10.29</td><td>14.5</td><td>19.05</td><td>26.71</td><td>26.86</td></tr><tr><td>3rd Qu.</td><td>97.00</td><td>5.00</td><td>17.0</td><td>18.00</td><td>34.00</td><td>35.00</td></tr><tr><td>Max.</td><td>219.00</td><td>215.00</td><td>234.0</td><td>255.00</td><td>221.00</td><td>178.00</td></tr></table> <p>image here:</p> <p><a href="https://sites.google.com/site/openfiles2/home/llerfly125v2geoarcgis2.tif">https://sites.google.com/site/openfiles2/home/llerfly125v2geoarcgis2.tif</a></p> <p>using ubuntu 10.04</p> <p>qgis 1.7.3</p>				1	2	3	4	5	6	Min.	-3.00	-3.00	-3.0	-3.00	-3.00	-3.00	1st Qu.	67.00	3.00	3.0	4.00	10.00	16.00	Median	84.00	4.00	4.0	4.00	17.00	24.00	Mean	79.78	10.29	14.5	19.05	26.71	26.86	3rd Qu.	97.00	5.00	17.0	18.00	34.00	35.00	Max.	219.00	215.00	234.0	255.00	221.00	178.00
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History

#1 - 2012-02-16 10:45 AM - Leyan Ouyang

The direct link to the file is not accessible, the file can be accessed from there though : <https://sites.google.com/site/openfiles2/home>

Actually, the problem lies within your file itself. Qgis will read GDAL metadata when they are available, and here your metadata indicate a mean and a standard deviation both equal to zero. This means Qgis will calculate min and max values based on this bogus information and obtain 0.

#2 - 2012-04-16 06:32 AM - Paolo Cavallini

- Target version changed from Version 1.7.4 to Version 1.8.0

#3 - 2012-08-10 03:58 AM - alobo -

Confirmed the problem of the erroneous stats in the GTif files with several examples.

These files are created in R through raster::writeRaster(), which might be using rgdal. In such a case, the problem of these GTif files with wrong stats could be caused by gdal and be more widespread. I'm inquiring the author of raster in R and the R sig-geo list.

Anyway, QGIS should have the option of re-calculating the stats.  
I would keep this ticket open until I find out more details in the R list,  
but this ticket should be closed soon. Another one for the optional stat calculation  
should be opened.  
Agus

#### #4 - 2012-08-10 04:02 AM - Giovanni Manghi

Agus,  
  
rasters are under heavy development in qgis-master. I guess soon we must check every raster related ticket and see if the issue still valid.  
  
alobo - wrote:

*Confirmed the problem of the erroneous stats in the GTif files with several examples.  
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Anyway, QGIS should have the option of re-calculating the stats.  
I would keep this ticket open until I find out more details in the R list, but this ticket should be closed soon. Another one for the optional stat calculation should be opened.  
Agus*

#### #5 - 2012-08-27 06:20 AM - alobo - - Status changed from Open to Closed

Confirmed in the R list that the problem is caused by R writing GTiff files that have erroneous stats info (writeRaster() used to set the mean and sd values always to 0).  
This has been changed for moderately sized layers, which are written with correct stats now, but very large layers still get wrong mean and sd (written now as NaN). By some reason the developer is reluctant to leave this info empty, which is what gdalinfo -stats would like:  
from <http://www.gdal.org/gdalinfo.html> :

#### DESCRIPTION

The gdalinfo program lists various information about a GDAL supported raster dataset.

-mm  
Force computation of the actual min/max values for each band in the dataset.  
-stats  
Read and display image statistics. Force computation if no statistics are stored in an image.

Anyway, this ticket has to be closed.

I open a new one asking for the feature of having a button to recalculate stats: qgis cannot rely on external info being always correct.