QGIS Application - Bug report #17369
NetCDF file crashing on load (UTM projection with grid_mapping)

2017-10-31 10:07 PM - Alan Snow

Status:	Closed		
Priority:	Normal		
Assignee:			
Category:	Rasters		
Affected QGIS version:	2.18.13	**Regression?:**	No
Operating System:	Ubuntu 16	**Easy fix?:**	No
Pull Request or Patch supplied:	No	**Resolution:**	invalid
Crashes QGIS or corrupts data:	Yes	**Copied to github as #:**	25266

Description

QGIS closes completely when opening the file without saying why.

It opens fine with GDAL and xarray.

NCDUMP:
```
netcdf state1km_simple {
dimensions:
   x = 1535 ;
   y = 790 ;
variables:
   double x(x) ;
      x:_FillValue = NaN ;
   double y(y) ;
      y:_FillValue = NaN ;
   int64 spatial_ref ;
      spatial_ref:spatial_ref = "PROJCS[\"UTM Zone 15, Northern Hemisphere\",GEOGCS[\"WGS
84\",DATUM[\"WGS_1984\",SPHEROID[\"WGS
84\",6378137,298.257223563,AUTHORITY[\"EPSG\",\"7030\"]],AUTHORITY[\"EPSG\",\"6326\"]],PRIMEM[\"Greenwich\",0,AUTHORITY[\"EPSG
Y[\"EPSG\",\"8901\"]],UNIT[\"degree\",0.0174532925199433,AUTHORITY[\"EPSG\",\"9122\"]],AUTHORITY[\"EPSG\",\"4326\"]],PROJECTION[\
CTION[\"Transverse_Mercator\"],PARAMETER[\"latitude_of_origin\",0],PARAMETER[\"central_meridian\",-93],PARAMETER[\"scale_factor\",0.9
ctor\",0.9996],PARAMETER[\"false_easting\",500000],PARAMETER[\"false_northing\",0],UNIT[\"Meter\",1]]" ;
      spatial_ref:crs_wkt = "PROJCS[\"UTM Zone 15, Northern Hemisphere\",GEOGCS[\"WGS
84\",DATUM[\"WGS_1984\",SPHEROID[\"WGS
84\",6378137,298.257223563,AUTHORITY[\"EPSG\",\"7030\"]],AUTHORITY[\"EPSG\",\"6326\"]],PRIMEM[\"Greenwich\",0,AUTHORITY[\"EPSG
Y[\"EPSG\",\"8901\"]],UNIT[\"degree\",0.0174532925199433,AUTHORITY[\"EPSG\",\"9122\"]],AUTHORITY[\"EPSG\",\"4326\"]],PROJECTION[\
CTION[\"Transverse_Mercator\"],PARAMETER[\"latitude_of_origin\",0],PARAMETER[\"central_meridian\",-93],PARAMETER[\"scale_factor\",0.9
ctor\",0.9996],PARAMETER[\"false_easting\",500000],PARAMETER[\"false_northing\",0],UNIT[\"Meter\",1]]" ;
   int64 time ;
      time:long_name = "time" ;
      time:standard_name = "time" ;
      time:units = "days since 2017-10-18 00:00:00" ;
      time:calendar = "proleptic_gregorian" ;
   double state_1km_1_MYD09GA(y, x) ;
      state_1km_1_MYD09GA:_FillValue = 65535. ;
      state_1km_1_MYD09GA:long_name = "1km Reflectance Data State QA - first layer" ;
      state_1km_1_MYD09GA:units = "bit field" ;
      state_1km_1_MYD09GA:valid_range = 0US, 57335US ;
      state_1km_1_MYD09GA:Nadir\ Data\ Resolution = "1km" ;
```

```
      state_1km_1_MYD09GA:QA\ index = "\n\tBits are listed from the MSB (bit 15) to the LSB (bit 0):\n\tBit    Description\n\t15     internal snow algorithm flag; \n\t       1 -- yes, 0.00%\n\t       0 -- no, 100.00%\n\t14     Salt Pan;\n\t       1 -- yes, 0.00%\n\t       0 -- no, 100.00%\n\t13     Pixel is adjacent to cloud;\n\t       1 -- yes, 5.13%\n\t       0 -- no, 94.87%\n\t12     MOD35 snow/ice flag;\n\t       1 -- yes, 0.00%\n\t       0 -- no, 100.00%\n\t11     internal fire algorithm flag;\n\t       1 -- fire, 0.01%\n\t       0 -- no fire, 99.99%\n\t10     internal cloud algorithm flag;\n\t     1 -- cloud, 17.43%\n\t       0 -- no cloud, 82.57%\n\t8-9    cirrus detected;\n\t       00 -- none, 84.24%\n\t       01 -- small, 1.14%\n\t       10 -- average, 2.51%\n\t       11 -- high, 12.10%\n\t6-7    aerosol quantity;\n\t       00 -- climatology, 20.49%\n\t       01 -- low, 75.85%\n\t       10 -- average, 3.21%\n\t       11 -- high, 0.45%\n\t3-5    land/water flag;\n\t       000 -- shallow ocean, 0.00%\n\t       001 -- land, 73.22%\n\t       010 -- ocean coastlines and lake shorelines, 16.48%\n\t       011 -- shallow inland water, 9.42%\n\t       100 -- ephemeral water, 0.00%\n\t     101 -- deep inland water, 0.88%\n\t       110 -- continental/moderate ocean, 0.00%\n\t       111 -- deep ocean, 0.00%\n\t2      cloud shadow;\n\t       1 -- yes, 1.90%\n\t       0 -- no, 98.10%\n\t0-1    cloud state;\n\t       00 -- clear, 82.64%\n\t       01 -- cloudy, 8.20%\n\t       10 -- mixed, 9.17%\n\t       11 -- not set, assumed clear, 0.00%\n" ;
      state_1km_1_MYD09GA:crs = "+proj=utm +zone=15 +datum=WGS84 +units=m +no_defs " ;
      state_1km_1_MYD09GA:res = 1557.11016872989, 1557.11016872989 ;
      state_1km_1_MYD09GA:is_tiled = 0UB ;
      state_1km_1_MYD09GA:transform = 1557.11016872989, 0., -635816.960644528, 0., -1557.11016872989, 5660204.61915843 ;
      state_1km_1_MYD09GA:spatial_ref = "PROJCS[\"UTM Zone 15, Northern Hemisphere\",GEOGCS[\"WGS 84\",DATUM[\"WGS_1984\",SPHEROID[\"WGS 84\",6378137,298.257223563,AUTHORITY[\"EPSG\",\"7030\"]],AUTHORITY[\"EPSG\",\"6326\"]],PRIMEM[\"Greenwich\",0,AUTHORITY[\"EPSG
Y[\"EPSG\",\"8901\"]],UNIT[\"degree\",0.0174532925199433,AUTHORITY[\"EPSG\",\"9122\"]],AUTHORITY[\"EPSG\",\"4326\"]],PROJECTION[\
CTION[\"Transverse_Mercator\"],PARAMETER[\"latitude_of_origin\",0],PARAMETER[\"central_meridian\",-93],PARAMETER[\"scale_factor\",0.9
ctor\",0.9996],PARAMETER[\"false_easting\",500000],PARAMETER[\"false_northing\",0],UNIT[\"Meter\",1]]" ;
      state_1km_1_MYD09GA:nodata = 65535. ;
      state_1km_1_MYD09GA:raster_dataset = "MODIS" ;
      state_1km_1_MYD09GA:raster_source = "MYD09GA" ;
      state_1km_1_MYD09GA:grid_mapping = "spatial_ref" ;

// global attributes:
      :coordinates = "time" ;
}
```

gdalinfo

```
gdalinfo state1km_simple.nc
Warning 1: No UNIDATA NC_GLOBAL:Conventions attribute
Driver: netCDF/Network Common Data Format
Files: state1km_simple.nc
Size is 1535, 790
Coordinate System is:
PROJCS["UTM Zone 15, Northern Hemisphere",
  GEOGCS["WGS 84",
    DATUM["WGS_1984",
      SPHEROID["WGS 84",6378137,298.257223563,
        AUTHORITY["EPSG","7030"]],
      AUTHORITY["EPSG","6326"]],
    PRIMEM["Greenwich",0,
      AUTHORITY["EPSG","8901"]],
    UNIT["degree",0.0174532925199433,
      AUTHORITY["EPSG","9122"]],
    AUTHORITY["EPSG","4326"]],
  PROJECTION["Transverse_Mercator"],
  PARAMETER["latitude_of_origin",0],
  PARAMETER["central_meridian",-93],
```

PARAMETER["scale_factor",0.9996],
PARAMETER["false_easting",500000],
PARAMETER["false_northing",0],
UNIT["Meter",1]]
Origin = (636596.023261542082764,5660984.161004629917443)
Pixel Size = (1558.125234028933164,-1559.083692391145632)
Metadata:
NC_GLOBAL#coordinates=time
spatial_ref#crs_wkt=PROJCS["UTM Zone 15, Northern Hemisphere",GEOGCS["WGS 84",DATUM["WGS_1984",SPHEROID["WGS 84",6378137,298.257223563,AUTHORITY["EPSG","7030"]],AUTHORITY["EPSG","6326"]],PRIMEM["Greenwich",0,AUTHORITY["EPSG","890
G","8901"]],UNIT["degree",0.0174532925199433,AUTHORITY["EPSG","9122"]],AUTHORITY["EPSG","4326"]],PROJECTION["Transverse_Me
rse_Mercator"],PARAMETER["latitude_of_origin",0],PARAMETER["central_meridian",-93],PARAMETER["scale_factor",0.9996],PARAMETER["f
ETER["false_easting",500000],PARAMETER["false_northing",0],UNIT["Meter",1]]
spatial_ref#spatial_ref=PROJCS["UTM Zone 15, Northern Hemisphere",GEOGCS["WGS 84",DATUM["WGS_1984",SPHEROID["WGS 84",6378137,298.257223563,AUTHORITY["EPSG","7030"]],AUTHORITY["EPSG","6326"]],PRIMEM["Greenwich",0,AUTHORITY["EPSG","890
G","8901"]],UNIT["degree",0.0174532925199433,AUTHORITY["EPSG","9122"]],AUTHORITY["EPSG","4326"]],PROJECTION["Transverse_Me
rse_Mercator"],PARAMETER["latitude_of_origin",0],PARAMETER["central_meridian",-93],PARAMETER["scale_factor",0.9996],PARAMETER["f
ETER["false_easting",500000],PARAMETER["false_northing",0],UNIT["Meter",1]]
state_1km_1_MYD09GA#crs=+proj=utm +zone=15 +datum=WGS84 +units=m +no_defs
state_1km_1_MYD09GA#grid_mapping=spatial_ref
state_1km_1_MYD09GA#is_tiled=0
state_1km_1_MYD09GA#long_name=1km Reflectance Data State QA - first layer
state_1km_1_MYD09GA#Nadir Data Resolution=1km
state_1km_1_MYD09GA#nodata=65535
state_1km_1_MYD09GA#QA index=
Bits are listed from the MSB (bit 15) to the LSB (bit 0):
Bit Description
15 internal snow algorithm flag;
1 - yes, 0.00%
0 -- no, 100.00%
14 Salt Pan;
1 -- yes, 0.00%
0 -- no, 100.00%
13 Pixel is adjacent to cloud;
1 -- yes, 5.13%
0 -- no, 94.87%
12 MOD35 snow/ice flag;
1 -- yes, 0.00%
0 -- no, 100.00%
11 internal fire algorithm flag;
1 -- fire, 0.01%
0 -- no fire, 99.99%
10 internal cloud algorithm flag;
1 -- cloud, 17.43%
0 -- no cloud, 82.57%
8-9 cirrus detected;
00 -- none, 84.24%
01 -- small, 1.14%
10 -- average, 2.51%
11 -- high, 12.10%
6-7 aerosol quantity;
00 -- climatology, 20.49%
01 -- low, 75.85%

10 -- average, 3.21%
11 -- high, 0.45%
3-5 land/water flag;
000 -- shallow ocean, 0.00%
001 -- land, 73.22%
010 -- ocean coastlines and lake shorelines, 16.48%
011 -- shallow inland water, 9.42%
100 -- ephemeral water, 0.00%
101 -- deep inland water, 0.88%
110 -- continental/moderate ocean, 0.00%
111 -- deep ocean, 0.00%
2 cloud shadow;
1 -- yes, 1.90%
0 -- no, 98.10%
0-1 cloud state;
00 -- clear, 82.64%
01 -- cloudy, 8.20%
10 -- mixed, 9.17%
11 -- not set, assumed clear, 0.00%
state_1km_1_MYD09GA#raster_dataset=MODIS
state_1km_1_MYD09GA#raster_source=MYD09GA
state_1km_1_MYD09GA#res={1557.110168729891,1557.110168729891}
state_1km_1_MYD09GA#spatial_ref=PROJCS["UTM Zone 15, Northern Hemisphere",GEOGCS["WGS
84",DATUM["WGS_1984",SPHEROID["WGS
84",6378137,298.257223563,AUTHORITY["EPSG","7030"]],AUTHORITY["EPSG","6326"]],PRIMEM["Greenwich",0,AUTHORITY["EPSG","8
Y["EPSG","8901"]],UNIT["degree",0.0174532925199433,AUTHORITY["EPSG","9122"]],AUTHORITY["EPSG","4326"]],PROJECTION["Trans
TION["Transverse_Mercator"],PARAMETER["latitude_of_origin",0],PARAMETER["central_meridian",-93],PARAMETER["scale_factor",0.999
actor",0.9996],PARAMETER["false_easting",500000],PARAMETER["false_northing",0],UNIT["Meter",1]]

state_1km_1_MYD09GA#transform={1557.110168729891,0,-635816.9606445276,0,-1557.110168729891,5660204.619158435
5}
state_1km_1_MYD09GA#units=bit field
state_1km_1_MYD09GA#valid_range={0,57335}
state_1km_1_MYD09GA#_FillValue=65535
x#_FillValue=nan
y#_FillValue=nan
Corner Coordinates:
Upper Left (636596.023, 5660984.161) (108d53'50.95"W, 50d 0' 3.98"N)
Lower Left (-636596.023, 4429308.044) (106d 9' 8.17"W, 39d15'45.92"N)
Upper Right (1755126.211, 5660984.161) (75d31'19.72"W, 49d46' 1.08"N)
Lower Right (1755126.211, 4429308.044) (78d30'54.69"W, 39d 6' 5.62"N)
Center (559265.094, 5045146.103) (92d14'26.35"W, 45d33'26.39"N)
Band 1 Block=1535x1 Type=Float64, ColorInterp=Undefined
NoData Value=65535
Unit Type: bit field
Metadata:
crs=+proj=utm +zone=15 +datum=WGS84 +units=m +no_defs
grid_mapping=spatial_ref
is_tiled=0
long_name=1km Reflectance Data State QA - first layer
Nadir Data Resolution=1km
NETCDF_VARNAME=state_1km_1_MYD09GA
nodata=65535

~~QA index=~~
~~Bits are listed from the MSB (bit 15) to the LSB (bit 0):~~
~~Bit Description~~
~~15 internal snow algorithm flag;~~
~~1 -~~ yes, 0.00%
0 -- no, 100.00%
14 Salt Pan;
1 -- yes, 0.00%
0 -- no, 100.00%
13 Pixel is adjacent to cloud;
1 -- yes, 5.13%
0 -- no, 94.87%
12 MOD35 snow/ice flag;
1 -- yes, 0.00%
0 -- no, 100.00%
11 internal fire algorithm flag;
1 -- fire, 0.01%
0 -- no fire, 99.99%
10 internal cloud algorithm flag;
1 -- cloud, 17.43%
0 -- no cloud, 82.57%
8-9 cirrus detected;
00 -- none, 84.24%
01 -- small, 1.14%
10 -- average, 2.51%
11 -- high, 12.10%
6-7 aerosol quantity;
00 -- climatology, 20.49%
01 -- low, 75.85%
10 -- average, 3.21%
11 -- high, 0.45%
3-5 land/water flag;
000 -- shallow ocean, 0.00%
001 -- land, 73.22%
010 -- ocean coastlines and lake shorelines, 16.48%
011 -- shallow inland water, 9.42%
100 -- ephemeral water, 0.00%
101 -- deep inland water, 0.88%
110 -- continental/moderate ocean, 0.00%
111 -- deep ocean, 0.00%
2 cloud shadow;
1 -- yes, 1.90%
0 -- no, 98.10%
0-1 cloud state;
00 -- clear, 82.64%
01 -- cloudy, 8.20%
10 -- mixed, 9.17%
11 -- not set, assumed clear, 0.00%
raster_dataset=MODIS
raster_source=MYD09GA
res={1557.110168729891,1557.110168729891}
spatial_ref=PROJCS["UTM Zone 15, Northern Hemisphere",GEOGCS["WGS 84",DATUM["WGS_1984",SPHEROID["WGS 84",6378137,298.257223563,AUTHORITY["EPSG","7030"]],AUTHORITY["EPSG","6326"]],PRIMEM["Greenwich",0,AUTHORITY["EPSG","8

```
    Y["EPSG","8901"]],UNIT["degree",0.0174532925199433,AUTHORITY["EPSG","9122"]],AUTHORITY["EPSG","4326"]],PROJECTION["Trans
    TION["Transverse_Mercator"],PARAMETER["latitude_of_origin",0],PARAMETER["central_meridian",-93],PARAMETER["scale_factor",0.999
    actor",0.9996],PARAMETER["false_easting",500000],PARAMETER["false_northing",0],UNIT["Meter",1]]
      transform={1557.110168729891,0,-635816.9606445276,0,-1557.110168729891,5660204.619158435}
      units=bit field
      valid_range={0,57335}
      _FillValue=65535

```

History

#1 - 2017-11-01 05:59 PM - Alan Snow

- Status changed from Open to Closed

I realized that I had two versions of GDAL.

- I had GDAL 1.11 on my Ubuntu machine, and it is not compatible with the NetCDF file. GDAL had a core dump when performing gdalinfo.

- I installed from the ubuntugis repos and have GDAL 2.2.1 with QGIS 2.18.14 and it works with the example NetCDF file.

#2 - 2017-11-02 09:28 AM - Giovanni Manghi

- Resolution set to invalid

Files

state1km.tar.gz	214 KB	2017-10-31	Alan Snow