

# QGIS Application - Bug report #14505

## Crash when loading raster layer with debug version of QT

2016-03-16 02:45 AM - Yun Lin

<b>Status:</b> Closed	
<b>Priority:</b> High	
<b>Assignee:</b>	
<b>Category:</b> Map Legend	
<b>Affected QGIS version:</b> 2.12.3	<b>Regression?:</b> No
<b>Operating System:</b> OSX	<b>Easy fix?:</b> No
<b>Pull Request or Patch supplied:</b> No	<b>Resolution:</b> not reproducible
<b>Crashes QGIS or corrupts data:</b> Yes	<b>Copied to github as #:</b> 22478

### Description

I'm developing a QT application which used QGIS 2.12 as the GIS platform. And during the developing, i compiled QGIS with debug info on my local machine for debugging purpose. And also i used debug version of QT 4.8.6 underhood for the same reason. When i try to load the sample data raster/SR\_50M\_alaska\_nad.tif from the official site, i got the following error in the console:

```
ASSERT: "last >= first" in file kernel/qabstractitemmodel.cpp, line 2413
The program has unexpectedly finished.
```

and on mac OS X 10.10.5 the crash report are as follow:

Thread 0 Crashed:: Dispatch queue: com.apple.main-thread

```
0  libsystem_kernel.dylib    0x00007fff8cd24286 __pthread_kill + 10
1  libsystem_c.dylib         0x00007fff8fc9ab abort + 129
2  QtCore_debug              0x00000001086e569f qt_message_output(QtMsgType, char const*) + 255 (qglobal.cpp:2364)
3  QtCore_debug              0x00000001086e5a7a qt_message(QtMsgType, char const*, __va_list_tag*) + 426 (qglobal.cpp:2405)
4  QtCore_debug              0x00000001086e4f7f qFatal(char const*, ...) + 367 (qglobal.cpp:2588)
5  QtCore_debug              0x00000001086e502f qt_assert(char const*, char const*, int) + 47 (qglobal.cpp:2055)
6  QtCore_debug              0x00000001088743c4 QAbstractItemModel::beginInsertRows(QModelIndex const&, int, int) + 116
(qabstractitemmodel.cpp:2413)
7  org.qgis.qgis2_core        0x0000000106defbd9 QgsLayerTreeModel::addLegendToLayer(QgsLayerTreeLayer*) + 1481
8  org.qgis.qgis2_core        0x0000000106df0f4d QgsLayerTreeModel::connectToLayer(QgsLayerTreeLayer*) + 269
9  org.qgis.qgis2_core        0x0000000106df0bf8 QgsLayerTreeModel::nodeAddedChildren(QgsLayerTreeNode*, int, int) + 312
10 org.qgis.qgis2_core        0x000000010736f2ac QgsLayerTreeModel::qt_static_metacall(QObject*, QMetaObject::Call, int, void**) + 236
11 QtCore_debug              0x00000001088ad9d4 QMetaObject::activate(QObject*, QMetaObject const*, int, void**) + 2180
(qobject.cpp:3567)
12 org.qgis.qgis2_core        0x000000010736fead QgsLayerTreeNode::addedChildren(QgsLayerTreeNode*, int, int) + 109
13 org.qgis.qgis2_core        0x0000000106e0343f QgsLayerTreeNode::insertChildrenPrivate(int, QList<QgsLayerTreeNode*>) + 1327
14 org.qgis.qgis2_core        0x0000000106de54de QgsLayerTreeGroup::insertChildNodes(int, QList<QgsLayerTreeNode*> const&) + 174
15 org.qgis.qgis2_core        0x0000000106e04631 QgsLayerTreeRegistryBridge::layersAdded(QList<QgsMapLayer*> const&) + 1009
16 org.qgis.qgis2_core        0x0000000107370402 QgsLayerTreeRegistryBridge::qt_static_metacall(QObject*, QMetaObject::Call, int, void**) + 258
17 QtCore_debug              0x00000001088ad9d4 QMetaObject::activate(QObject*, QMetaObject const*, int, void**) + 2180
(qobject.cpp:3567)
18 org.qgis.qgis2_core        0x000000010735c552 QgsMapLayerRegistry::legendLayersAdded(QList<QgsMapLayer*>) + 66
19 org.qgis.qgis2_core        0x0000000106fd1898 QgsMapLayerRegistry::addMapLayers(QList<QgsMapLayer*> const&, bool, bool) + 904
```

```

20 libgui.1.dylib      0x0000000106c5b5d4 my_application::addRasterLayer(QgsRasterLayer*) + 212
21 libgui.1.dylib      0x0000000106c5aed4 my_application::addRasterLayerPrivate(QString const&, QString const&, QString
const&, bool, bool) + 1044
22 libgui.1.dylib      0x0000000106c5a4d9 my_application::addRasterLayers(QStringList const&, bool) + 761
23 libgui.1.dylib      0x0000000106c5a190 my_application::addRasterLayer() + 208
24 libgui.1.dylib      0x0000000106c61cdb my_application::qt_static_metacall(QObject*, QMetaObject::Call, int, void**) + 443
(moc_mpsmainwindow.cpp:108)
25 QtCore_debug        0x00000001088ad9d4 QMetaObject::activate(QObject*, QMetaObject const*, int, void**) + 2180
(qobject.cpp:3567)
26 QtGui_debug         0x0000000108e1b30b QAction::triggered(bool) + 75 (moc_qaction.cpp:277)
27 QtGui_debug         0x0000000108e1b112 QAction::activate(QAction::ActionEvent) + 402 (qaction.cpp:1259)
28 QtGui_debug         0x0000000108d8bf87 QAction::trigger() + 23 (qaction.h:218)
29 QtGui_debug         0x00000001094ff183 QToolButton::nextCheckState() + 83 (qtoolbutton.cpp:1153)
30 QtGui_debug         0x00000001093b36c4 QAbstractButtonPrivate::click() + 260 (qabstractbutton.cpp:530)
31 QtGui_debug         0x00000001093b4c5c QAbstractButton::mousePressEvent(QMouseEvent*) + 220
(qabstractbutton.cpp:1124)
32 QtGui_debug         0x00000001094fea44 QToolButton::mousePressEvent(QMouseEvent*) + 52 (qtoolbutton.cpp:724)
33 QtGui_debug         0x0000000108eaf5ac QWidget::event(QEvent*) + 524 (qwidget.cpp:8390)
34 QtGui_debug         0x00000001093b4a7e QAbstractButton::event(QEvent*) + 446 (qabstractbutton.cpp:1082)
35 QtGui_debug         0x00000001094ff219 QToolButton::event(QEvent*) + 137 (qtoolbutton.cpp:1168)
36 QtGui_debug         0x0000000108e29f2c QApplicationPrivate::notify_helper(QObject*, QEvent*) + 396
(qapplication.cpp:4565)
37 QtGui_debug         0x0000000108e2d32a QApplication::notify(QObject*, QEvent*) + 4874 (qapplication.cpp:4108)
38 org.qgis.qgis2_core  0x0000000106e4fa44 QgsApplication::notify(QObject*, QEvent*) + 148
39 QtCore_debug        0x0000000108885784 QCoreApplication::notifyInternal(QObject*, QEvent*) + 180
(qcoreapplication.cpp:953)
40 QtGui_debug         0x0000000108d5e0df QCoreApplication::sendSpontaneousEvent(QObject*, QEvent*) + 95
(qcoreapplication.h:234)
41 QtGui_debug         0x0000000108e2afc1 QApplicationPrivate::sendMouseEvent(QWidget*, QMouseEvent*, QWidget*,
QWidget*, QWidget**, QPointer<QWidget>&, bool) + 1281 (qapplication.cpp:3171)
42 QtGui_debug         0x0000000108d9206a qt_mac_handleMouseEvent(NSEvent*, QEvent::Type, Qt::MouseButton, QWidget*,
bool) + 1338 (qt_cocoa_helpers_mac.mm:1269)
43 QtGui_debug         0x0000000108d7cd25 -[QCocoaView mouseUp:] + 69 (qcocoaview_mac.mm:564)
44 com.apple.AppKit    0x00007fff8e536e37 -[NSWindow _reallySendEvent:isDelayedEvent:] + 648
45 com.apple.AppKit    0x00007fff8dec9c86 -[NSWindow sendEvent:] + 470
46 QtGui_debug         0x0000000108d84642 -[QCocoaWindow sendEvent:] + 178 (qcocoasharedwindowmethods_mac_p.h:184)
47 com.apple.AppKit    0x00007fff8dec6212 -[NSApplication sendEvent:] + 2504
48 QtGui_debug         0x0000000108d8c505 -[QNSApplication sendEvent:] + 101 (qcocoaapplication_mac.mm:187)
49 com.apple.AppKit    0x00007fff8ddefb68 -[NSApplication run] + 711
50 QtGui_debug         0x0000000108d9bdf8 QEventDispatcherMac::processEvents(QFlags<QEventLoop::ProcessEventsFlag>)
+ 1064 (qeventdispatcher_mac.mm:615)
51 QtCore_debug        0x0000000108880ce6 QEventLoop::processEvents(QFlags<QEventLoop::ProcessEventsFlag>) + 166
(qeventloop.cpp:149)
52 QtCore_debug        0x0000000108880eed QEventLoop::exec(QFlags<QEventLoop::ProcessEventsFlag>) + 493
(qeventloop.cpp:204)
53 QtCore_debug        0x0000000108885f53 QCoreApplication::exec() + 307 (qcoreapplication.cpp:1225)
54 QtGui_debug         0x0000000108e2c016 QApplication::exec() + 22 (qapplication.cpp:3823)
55 com.yourcompany.my_app 0x0000000106c4880c main + 140 (main.cpp:9)
56 com.yourcompany.my_app 0x0000000106c48774 start + 52

```

I done some debugging, the reason came out obvious: In the file QGIS/src/core/layertree/qgslayertreemodel.cpp, at line 1117

```
void QgsLayerTreeModel::addLegendToLayer( QgsLayerTreeLayer* nodeL ) {
```

```
//...
if ( ! isEmbedded ) beginInsertRows( node2index( nodeL ), 0, count - 1 );
//...
}
```

The var "count" have a value of 0. And there is a Assert sentence in function void QAbstractItemModel::beginInsertRows(const QModelIndex &parent, int first, int last) of class QAbstractItemModel in QT core moduel which do not allowed such situation.

And indeed, the release version of QGIS had the same problem - the value of var 'count' is 0 when loading raster file SR\_50M\_alaska\_nad.tif. So why the official release verison of QGIS does not have a crash like my application here? According to my investigation, because it used the release version of QT 4.8.6 as well, which will replace the ASSERT sentence to no-ops during its building process. And i think(not verified) the rest of code after ASSERT in function beginInsertRows are carried out with any issue even the var 'last' with a value of -1.

I don't know this count var should have value of 0 from the business view, but it definitely possible in programming. As much i like to, but i can't fix it by just adding some guarding condition, leave that to the expert.

## History

---

### #1 - 2016-03-16 03:02 AM - Yun Lin

Hi please noted that, the raster file raster/SR\_50M\_alaska\_nad.tif(this file have two sub-nodes showing in the map lengend ) mentioned in previous description can be loaded successfully. Use the attached file 1870\_southern-india.tif instead to reproduce the issue.

### #2 - 2016-03-16 03:05 AM - Yun Lin

zip it since failed to upload it directly

### #3 - 2016-03-16 03:07 AM - Yun Lin

- File Screen\_Shot\_2016-03-16\_at\_18.06.39.png added

### #4 - 2016-03-16 03:11 AM - Yun Lin

OK. This is weird! I can't upload the file 1870\_southern-india.tif, even if i zipped it! The error message is as showing in the screen shot! BUT, anyway, this screen shot png file will also do the trick to crash the application when loading it as raster layrer :)

### #5 - 2016-03-16 03:25 AM - Paolo Cavallini

- Subject changed from Crashed when loading raster layer with debug verion of QT to Crashed when loading raster layer with debug version of QT

### #6 - 2017-02-04 02:50 AM - Giovanni Manghi

- Priority changed from Normal to High

### #7 - 2017-03-07 10:16 AM - Giovanni Manghi

- Status changed from Open to Feedback

Is this still the case on 2.18.4 or qgis3/master?

### #8 - 2017-03-12 07:43 PM - Yun Lin

Giovanni Manghi wrote:

| *Is this still the case on 2.18.4 or qgis3/master?*

I haven't upgrade my project to 2.18+ yet. Let you know once i make the upgrade and test it.

**#9 - 2017-04-30 09:56 AM - Giovanni Manghi**

- Resolution set to not reproducible
- Subject changed from *Crashed when loading raster layer with debug version of QT* to *Crash when loading raster layer with debug version of QT*
- Description updated
- Status changed from *Feedback* to *Closed*

| *I haven't upgrade my project to 2.18+ yet. Let you know once i make the upgrade and test it.*

reopen if it still applies to the latest qgis versions

**Files**

---

Screen_Shot_2016-03-16_at_18.06.39.png	30.6 KB	2016-03-16	Yun Lin
--	---------	------------	---------