

## EDIT - bug #9657

### OccurrenceServiceImpl.listRootUnitDTOsByAssociatedTaxon fails with HibernateException: More than one row with the given identifier was found: 51

06/08/2021 03:52 PM - Andreas Kohlbecker

<b>Status:</b>	Closed	<b>Start date:</b>	
<b>Priority:</b>	Highest	<b>Due date:</b>	
<b>Assignee:</b>	Andreas Müller	<b>% Done:</b>	100%
<b>Category:</b>	cdmlib	<b>Estimated time:</b>	0:00 hour
<b>Target version:</b>	Release 5.25	<b>Found in Version:</b>	
<b>Severity:</b>	normal		
<b>Description</b>			
<a href="http://api.cybertaxonomy.org/flora-malesiana-prospective/portal/taxon/2debf5ee-cb57-40bc-af89-173d1d17cefe/rootUnitDTOs.json">http://api.cybertaxonomy.org/flora-malesiana-prospective/portal/taxon/2debf5ee-cb57-40bc-af89-173d1d17cefe/rootUnitDTOs.json</a>			
<p>Caused by: org.hibernate.HibernateException: More than one row with the given identifier was found : 51, for class: eu.etaxonomy.cdm.model.name.NomenclaturalSource</p> <pre>at org.hibernate.loader.entity.AbstractEntityLoader.load(AbstractEntityLoader.java:86) at org.hibernate.loader.entity.EntityLoader.loadByUniqueKey(EntityLoader.java:143) at org.hibernate.persister.entity.AbstractEntityPersister.loadByUniqueKey(AbstractEntityPersister.java:2238) at org.hibernate.type.EntityType.loadByUniqueKey(EntityType.java:694) at org.hibernate.type.EntityType.resolve(EntityType.java:436) at org.hibernate.engine.internal.TwoPhaseLoad.doInitializeEntity(TwoPhaseLoad.java:165) at org.hibernate.engine.internal.TwoPhaseLoad.initializeEntity(TwoPhaseLoad.java:125) at org.hibernate.loader.plan.exec.process.internal.AbstractRowReader.performTwoPhaseLoad(AbstractRowReader.java:238) at org.hibernate.loader.plan.exec.process.internal.AbstractRowReader.finishUp(AbstractRowReader.java:209) at org.hibernate.loader.plan.exec.process.internal.ResultSetProcessorImpl.extractResults(ResultSetProcessorImpl.java:133) at org.hibernate.loader.plan.exec.internal.AbstractLoadPlanBasedLoader.executeLoad(AbstractLoadPlanBasedLoader.java:122) at org.hibernate.loader.plan.exec.internal.AbstractLoadPlanBasedLoader.executeLoad(AbstractLoadPlanBasedLoader.java:86) at org.hibernate.loader.entity.plan.AbstractLoadPlanBasedEntityLoader.load(AbstractLoadPlanBasedEntityLoader.java:167) at org.hibernate.persister.entity.AbstractEntityPersister.load(AbstractEntityPersister.java:4083) at org.hibernate.event.internal.DefaultLoadEventListener.loadFromDatasource(DefaultLoadEventListener.java:508) at org.hibernate.event.internal.DefaultLoadEventListener.doLoad(DefaultLoadEventListener.java:478) at org.hibernate.event.internal.DefaultLoadEventListener.load(DefaultLoadEventListener.java:219) at org.hibernate.event.internal.DefaultLoadEventListener.doOnLoad(DefaultLoadEventListener.java:116) at org.hibernate.event.internal.DefaultLoadEventListener.onLoad(DefaultLoadEventListener.java:89) at org.hibernate.internal.SessionImpl.fireLoad(SessionImpl.java:1142) at org.hibernate.internal.SessionImpl.immediateLoad(SessionImpl.java:1000) at org.hibernate.proxy.AbstractLazyInitializer.initialize(AbstractLazyInitializer.java:156) at org.hibernate.Hibernate.initialize(Hibernate.java:60) at eu.etaxonomy.cdm.hibernate.HibernateProxyHelper.deproxy(HibernateProxyHelper.java:61) at eu.etaxonomy.cdm.model.common.CdmBase.deproxy(CdmBase.java:312) at eu.etaxonomy.cdm.persistence.hibernate.CdmPreDataChangeListener.generateCaches(CdmPreDataChangeListener.java:148) at eu.etaxonomy.cdm.persistence.hibernate.CacheStrategyGenerator.saveOrUpdateOrMerge(CacheStrategyGenerator.java:47) at eu.etaxonomy.cdm.persistence.hibernate.CacheStrategyGenerator.onSaveOrUpdate(CacheStrategyGenerator.java:32) at org.hibernate.internal.SessionImpl.fireSaveOrUpdate(SessionImpl.java:651)</pre>			

```
at org.hibernate.internal.SessionImpl.saveOrUpdate (SessionImpl.java:643)
at org.hibernate.engine.spi.CascadingActions$5.cascade (CascadingActions.java:218)
at org.hibernate.engine.internal.Cascade.cascadeToOne (Cascade.java:423)
at org.hibernate.engine.internal.Cascade.cascadeAssociation (Cascade.java:348)
at org.hibernate.engine.internal.Cascade.cascadeProperty (Cascade.java:187)
at org.hibernate.engine.internal.Cascade.cascade (Cascade.java:136)
at org.hibernate.event.internal.AbstractFlushingEventListener.cascadeOnFlush (AbstractFlushingEvent
ventListener.java:150)
at org.hibernate.event.internal.AbstractFlushingEventListener.prepareEntityFlushes (AbstractFlu
shingEventListener.java:141)
at org.hibernate.event.internal.AbstractFlushingEventListener.flushEverythingToExecutions (Abst
ractFlushingEventListener.java:74)
at org.hibernate.event.internal.DefaultAutoFlushEventListener.onAutoFlush (DefaultAutoFlushEven
tListener.java:44)
at org.hibernate.internal.SessionImpl.autoFlushIfRequired (SessionImpl.java:1264)
at org.hibernate.internal.SessionImpl.list (SessionImpl.java:1332)
at org.hibernate.internal.QueryImpl.list (QueryImpl.java:87)
at eu.etaxonomy.cdm.persistence.dao.initializer.AdvancedBeanInitializer.bulkLoadLazyCollection
s (AdvancedBeanInitializer.java:530)
at eu.etaxonomy.cdm.persistence.dao.initializer.AdvancedBeanInitializer.bulkLoadLazies (Advance
dBeanInitializer.java:432)
at eu.etaxonomy.cdm.persistence.dao.initializer.AdvancedBeanInitializer.initializeNodeNoWildca
rd (AdvancedBeanInitializer.java:241)
at eu.etaxonomy.cdm.persistence.dao.initializer.AdvancedBeanInitializer.initializeNode (Advance
dBeanInitializer.java:122)
at eu.etaxonomy.cdm.persistence.dao.initializer.AdvancedBeanInitializer.initializeNodeRecursiv
e (AdvancedBeanInitializer.java:102)
at eu.etaxonomy.cdm.persistence.dao.initializer.AdvancedBeanInitializer.initializeNodeRecursiv
e (AdvancedBeanInitializer.java:104)
at eu.etaxonomy.cdm.persistence.dao.initializer.AdvancedBeanInitializer.initializeAll (Advanced
BeanInitializer.java:84)
at eu.etaxonomy.cdm.persistence.dao.hibernate.occurrence.OccurrenceDaoHibernateImpl.listByAsso
ciatedTaxon (OccurrenceDaoHibernateImpl.java:705)
at eu.etaxonomy.cdm.api.service.OccurrenceServiceImpl.listRootUnitDTOsByAssociatedTaxon (Occurr
enceServiceImpl.java:539)
```

## Associated revisions

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### Revision 2fb46fd8 - 07/15/2021 11:52 AM - Andreas Müller

ref #9657 fix gatheringDate compare for empty dates (e.g. freetext dates)

### Revision 8c341841 - 07/15/2021 02:47 PM - Andreas Müller

ref #9657 fully implement compare method for partials used in CDM

### Revision 315d359e - 07/15/2021 03:23 PM - Andreas Müller

ref #9657 cleanup and make Partial comparator configurable for null handling

## History

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### #1 - 06/09/2021 01:15 PM - Andreas Müller

I tested by calling

```
appCtr.getOccurrenceService().findRootUnitDTOs(UUID.fromString("2debf5ee-cb57-40bc-af89-173d1d17cefe"));
```

from commandline but could not reproduce. Seems like autoflush behavior is different. E.g.

```
at eu.etaxonomy.cdm.persistence.hibernate.CdmPreDataChangeListener.generateCaches (CdmPreDataChangeListener.java:148)
```

is not called

### #2 - 06/09/2021 01:25 PM - Andreas Müller

But there are multiple nomSources that link to the same name:

```
SELECT *
FROM OriginalSourceBase osb
WHERE osb.sourcedName_id = 51
```

more generell:

```
SELECT osb.sourcedName_id , osb.*
FROM OriginalSourceBase osb
WHERE osb.sourcedName_id IN (
SELECT osb.sourcedName_id
FROM OriginalSourceBase osb
WHERE osb.DTYPE LIKE 'Nomen%'
GROUP BY osb.sourcedName_id
HAVING COUNT(*) > 1
)
```

### #3 - 06/09/2021 01:41 PM - Andreas Müller

Strange is, this problem exists only in flora\_malesiana\_prospective. In no other production database such duplicate records exist.

Also strange, the records are all completely empty except for the sourcedName\_id (and base data like id, uuid, created, DTYPE and sourceType)

### #4 - 06/09/2021 03:42 PM - Andreas Müller

- Status changed from New to Resolved

- % Done changed from 0 to 50

I checked in old databases from 12\_2020 (before nomenclatural sources movement) and 04\_2021 (before deleting old TaxonName.nomenclaturalCitation\_id column).

In none of the databases there was an indication why these records were created. So I deleted them from OriginalSourceBase and OriginalSourceBase\_AUD (for strange reason these records were created also in AUD while other nom.source records are not audited before the 12\_2020 move).

### #5 - 06/09/2021 03:44 PM - Andreas Müller

- Assignee changed from Andreas Müller to Andreas Kohlbecker

Please review. The page shows no error anymore:

[http://portal.cybertaxonomy.org/flora-malesiana-prospective/cdm\\_dataportal/taxon/2debf5ee-cb57-40bc-af89-173d1d17cefe/specimens](http://portal.cybertaxonomy.org/flora-malesiana-prospective/cdm_dataportal/taxon/2debf5ee-cb57-40bc-af89-173d1d17cefe/specimens)

However, I still get an empty result for the api query in the description (

<http://api.cybertaxonomy.org/flora-malesiana-prospective/portal/taxon/2debf5ee-cb57-40bc-af89-173d1d17cefe/rootUnitDTOs.json>)

### #6 - 06/09/2021 07:08 PM - Andreas Müller

Andreas Müller wrote:

Please review. The page shows no error anymore:

[http://portal.cybertaxonomy.org/flora-malesiana-prospective/cdm\\_dataportal/taxon/2debf5ee-cb57-40bc-af89-173d1d17cefe/specimens](http://portal.cybertaxonomy.org/flora-malesiana-prospective/cdm_dataportal/taxon/2debf5ee-cb57-40bc-af89-173d1d17cefe/specimens)

However, I still get an empty result for the api query in the description (

<http://api.cybertaxonomy.org/flora-malesiana-prospective/portal/taxon/2debf5ee-cb57-40bc-af89-173d1d17cefe/rootUnitDTOs.json>)

Upps, sorry, that was not correct. It only worked because "derivate path" was used. But now the other error also observed for alga terra (no ticket yet) seems to appear when switching to tree version.

### #7 - 07/15/2021 09:48 AM - Andreas Kohlbecker

- Status changed from Resolved to Feedback

- Assignee changed from Andreas Kohlbecker to Andreas Müller

the original exception has disappeared, but now the request portal/taxon/2debf5ee-cb57-40bc-af89-173d1d17cefe/rootUnitDTOs.json

fails with a ClassCastException:

```
Caused by: java.lang.ClassCastException: ReadablePartial objects must have matching field types
    at org.joda.time.base.AbstractPartial.compareTo(AbstractPartial.java:315)
    at eu.etaxonomy.cdm.api.service.OccurrenceServiceImpl$1.compare(OccurrenceServiceImpl.java:586)
    at eu.etaxonomy.cdm.api.service.OccurrenceServiceImpl$1.compare(OccurrenceServiceImpl.java:1)
    at java.util.TimSort.binarySort(TimSort.java:296)
    at java.util.TimSort.sort(TimSort.java:239)
    at java.util.Arrays.sort(Arrays.java:1512)
    at java.util.ArrayList.sort(ArrayList.java:1454)
    at java.util.Collections.sort(Collections.java:175)
    at eu.etaxonomy.cdm.api.service.OccurrenceServiceImpl.listRootUnitDTOsByAssociatedTaxon(OccurrenceServiceI
```

```

mpl.java:570)
    at sun.reflect.NativeMethodAccessorImpl.invoke0(Native Method)
    at sun.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.java:62)
    at sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:43)
    at java.lang.reflect.Method.invoke(Method.java:498)
    at org.springframework.aop.support.AopUtils.invokeJoinpointUsingReflection(AopUtils.java:333)
    at org.springframework.aop.framework.ReflectiveMethodInvocation.invokeJoinpoint(ReflectiveMethodInvocation
.java:190)
    at org.springframework.aop.framework.ReflectiveMethodInvocation.proceed(ReflectiveMethodInvocation.java:15
7)
    at org.springframework.transaction.interceptor.TransactionInterceptor$1.proceedWithInvocation(TransactionI
nterceptor.java:99)
    at org.springframework.transaction.interceptor.TransactionAspectSupport.invokeWithinTransaction(Transaction
AspectSupport.java:283)
    at org.springframework.transaction.interceptor.TransactionInterceptor.invoke(TransactionInterceptor.java:9
6)
    at org.springframework.aop.framework.ReflectiveMethodInvocation.proceed(ReflectiveMethodInvocation.java:17
9)
    at org.springframework.aop.framework.JdkDynamicAopProxy.invoke(JdkDynamicAopProxy.java:213)
    at com.sun.proxy.$Proxy179.listRootUnitDTOsByAssociatedTaxon(Unknown Source)
    at eu.etaxonomy.cdm.remote.controller.TaxonController.doListRooUnitDTOs(TaxonController.java:344)
    at sun.reflect.NativeMethodAccessorImpl.invoke0(Native Method)
    at sun.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.java:62)
    at sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:43)
    at java.lang.reflect.Method.invoke(Method.java:498)
    at org.springframework.web.method.support.InvocableHandlerMethod.doInvoke(InvocableHandlerMethod.java:205)
    at org.springframework.web.method.support.InvocableHandlerMethod.invokeForRequest(InvocableHandlerMethod.j
ava:133)
    at org.springframework.web.servlet.mvc.method.annotation.ServletInvocableHandlerMethod.invokeAndHandle(Ser
vletInvocableHandlerMethod.java:97)
    at org.springframework.web.servlet.mvc.method.annotation.RequestMappingHandlerAdapter.invokeHandlerMethod(
RequestMappingHandlerAdapter.java:854)
    at org.springframework.web.servlet.mvc.method.annotation.RequestMappingHandlerAdapter.handleInternal(Reque
stMappingHandlerAdapter.java:765)
    at org.springframework.web.servlet.mvc.method.AbstractHandlerMethodAdapter.handle(AbstractHandlerMethodAda
pter.java:85)
    at org.springframework.web.servlet.DispatcherServlet.doDispatch(DispatcherServlet.java:967)
    at org.springframework.web.servlet.DispatcherServlet.doService(DispatcherServlet.java:901)
    at org.springframework.web.servlet.FrameworkServlet.processRequest(FrameworkServlet.java:970)
    ... 67 more

```

this should be fixed before releasing

#### #8 - 07/15/2021 12:00 PM - Andreas Müller

- Status changed from *Feedback* to *Resolved*

- Assignee changed from *Andreas Müller* to *Andreas Kohlbecker*

This problem occurs due to using the `compareTo` method for `gatheringEvent.timeperiod.start` in the newly updated comparator for `listRootUnitDTOsByAssociatedTaxon`.

`Timeperiod.start` is a `partial` and `compareTo` therefore must only be used if `partial.size()` is equal as documented in the javadoc.

In a first step I excluded now all empty `timeperiod.start` partials from comparison to avoid the above exception which is probably thrown due to a `timeperiod` using `freetext` instead of `start`.

However, further adaptation is needed to allow comparison of partials also for partials only having any of the year, month or day fields set.

#### #9 - 07/15/2021 01:14 PM - Andreas Müller

Can you please test this? As we do not have a test server for *flora-malesiana-prospective* I can't do this easily.

#### #10 - 07/15/2021 01:38 PM - Andreas Kohlbecker

I tested again locally the line on `OccurrenceServiceImpl$1.compareTo`(`OccurrenceServiceImpl.java:588`) has changed but the error persists:

```

Caused by: java.lang.ClassCastException: ReadablePartial objects must have matching field types
    at org.joda.time.base.AbstractPartial.compareTo(AbstractPartial.java:315)
    at eu.etaxonomy.cdm.api.service.OccurrenceServiceImpl$1.compareTo(OccurrenceServiceImpl.java:588)
    at eu.etaxonomy.cdm.api.service.OccurrenceServiceImpl$1.compareTo(OccurrenceServiceImpl.java:1)
    at java.util.TimSort.binarySort(TimSort.java:296)
    at java.util.TimSort.sort(TimSort.java:239)
    at java.util.Arrays.sort(Arrays.java:1512)
    at java.util.ArrayList.sort(ArrayList.java:1454)
    at java.util.Collections.sort(Collections.java:175)
    at eu.etaxonomy.cdm.api.service.OccurrenceServiceImpl.listRootUnitDTOsByAssociatedTaxon(OccurrenceServiceI

```

```

mpl.java:571)
  at sun.reflect.NativeMethodAccessorImpl.invoke0(Native Method)
  at sun.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.java:62)
  at sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:43)
  at java.lang.reflect.Method.invoke(Method.java:498)
  at org.springframework.aop.support.AopUtils.invokeJoinpointUsingReflection(AopUtils.java:333)
  at org.springframework.aop.framework.ReflectiveMethodInvocation.invokeJoinpoint(ReflectiveMethodInvocation.java:190)
  at org.springframework.aop.framework.ReflectiveMethodInvocation.proceed(ReflectiveMethodInvocation.java:157)
  at org.springframework.transaction.interceptor.TransactionInterceptor$1.proceedWithInvocation(TransactionInterceptor.java:99)
  at org.springframework.transaction.interceptor.TransactionAspectSupport.invokeWithinTransaction(TransactionAspectSupport.java:283)
  at org.springframework.transaction.interceptor.TransactionInterceptor.invoke(TransactionInterceptor.java:96)
  at org.springframework.aop.framework.ReflectiveMethodInvocation.proceed(ReflectiveMethodInvocation.java:179)
  at org.springframework.aop.framework.JdkDynamicAopProxy.invoke(JdkDynamicAopProxy.java:213)
  at com.sun.proxy.$Proxy179.listRootUnitDTOsByAssociatedTaxon(Unknown Source)
  at eu.etaxonomy.cdm.remote.controller.TaxonController.doListRootUnitDTOs(TaxonController.java:344)
  at sun.reflect.NativeMethodAccessorImpl.invoke0(Native Method)
  at sun.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.java:62)
  at sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:43)
  at java.lang.reflect.Method.invoke(Method.java:498)
  at org.springframework.web.method.support.InvocableHandlerMethod.doInvoke(InvocableHandlerMethod.java:205)
  at org.springframework.web.method.support.InvocableHandlerMethod.invokeForRequest(InvocableHandlerMethod.java:133)
  at org.springframework.web.servlet.mvc.method.annotation.ServletInvocableHandlerMethod.invokeAndHandle(ServletInvocableHandlerMethod.java:97)
  at org.springframework.web.servlet.mvc.method.annotation.RequestMappingHandlerAdapter.invokeHandlerMethod(RequestMappingHandlerAdapter.java:854)
  at org.springframework.web.servlet.mvc.method.annotation.RequestMappingHandlerAdapter.handleInternal(RequestMappingHandlerAdapter.java:765)
  at org.springframework.web.servlet.mvc.method.AbstractHandlerMethodAdapter.handle(AbstractHandlerMethodAdapter.java:85)
  at org.springframework.web.servlet.DispatcherServlet.doDispatch(DispatcherServlet.java:967)
  at org.springframework.web.servlet.DispatcherServlet.doService(DispatcherServlet.java:901)
  at org.springframework.web.servlet.FrameworkServlet.processRequest(FrameworkServlet.java:970)
  ... 67 more

```

#### #11 - 07/15/2021 01:38 PM - Andreas Kohlbecker

- Status changed from Resolved to In Progress
- Assignee changed from Andreas Kohlbecker to Andreas Müller

#### #12 - 07/15/2021 02:52 PM - Andreas Müller

- Status changed from In Progress to Resolved
- Assignee changed from Andreas Müller to Andreas Kohlbecker

This should be fully fixed now. Comparing partials may not throw an exception anymore. Only the order of gathering events with date and without date may have changed so we need to check if all dataportal tests still run.

Generally we order dates with no information to the end (=largest date). This previously has been implemented in `listRootUnitDTOsByAssociatedTaxon()` the other way round as far as I can see.

Please review.

#### #13 - 07/15/2021 02:58 PM - Andreas Kohlbecker

- Status changed from Resolved to Closed
- Assignee changed from Andreas Kohlbecker to Andreas Müller
- % Done changed from 50 to 100

The above request is now ok and does no longer throw an exception.

Sort order deviation in the portal can be neglected for now. We can handle these later if needed.