Demo for the Semantic Web Working Group

Preamble

This is an R Markdown Notebook. When you execute code within the notebook, the results appear beneath the code.

Try executing this chunk by clicking the *Run* button within the chunk or by placing your cursor inside it and pressing *Ctrl+Shift+Enter*.

Add a new chunk by clicking the *Insert Chunk* button on the toolbar or by pressing *Ctrl+Alt+I*.

When you save the notebook, an HTML file containing the code and output will be saved alongside it (click the *Preview* button or press *Ctrl+Shift+K* to preview the HTML file).

Generating RDF from marked-up text

We're using the `obkms` and the `rdf4jr` R libraries (not yet published). The `obkms` library deals with the creation of RDF, while the `rdf4jr` library deals with the communication with a GraphDB instance (our triplestore).

```
library(obkms)
library(rdf4jr)
```

Before we begin, we need to supply the access data. Access data can be read from a YAML configuration file. Note: the password is not stored in the configuration file. The user-password needs to be read from the environment variable `OBKMS_SECRET`. After we read the configuration we need to setup an environment where the functions are continuously going to look for the access credentials. We do this with the package `init_env` function.

```
configuration_file = "/home/viktor/Work/OBKMS/etc/config.yml"
server_access_options = yaml::yaml.load_file( configuration_file )
server_access_options$userpwd = Sys.getenv("OBKMS_SECRET")
init_env(server_access_options)
```

The `obkms` library has lots of functions:

```
?obkms
```

If you want to convert an XML file to RDF, you use the `xml2rdf` function. Currently, only the `TaxPub` XMl schema and Turtle serialization of RDF is supported.

```
example_taxpub = "/home/viktor/Work/OBKMS/Tests/BDJ373/10.3897_BDJ.4.e7713.xml"
turtle = xml2rdf( example_taxpub )
cat(turtle)
```

```
## @prefix skos: <http://www.w3.org/2004/02/skos/core#> .
##  @prefix pensoft: <http://id.pensoft.net/> .
##  @prefix rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#> .
##  @prefix foaf: <http://xmlns.com/foaf/0.1/> .
##  @prefix pro: <http://purl.org/spar/pro/> .
##  @prefix scoro: <http://purl.org/spar/scoro/> .
##  @prefix ti: <http://www.ontologydesignpatterns.org/cp/owl/timeinterval.owl#> .
##  @prefix tvc: <http://www.essepuntato.it/2012/04/tvc/> .
##  @prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
##  @prefix fabio: <http://purl.org/spar/fabio/> .
##  @prefix dcterms: <http://purl.org/dc/terms/> .
```

```
##  @prefix dc: <http://purl.org/dc/elements/1.1/> .
##  @prefix frbr: <http://purl.org/spar/frbr/> .
##  @prefix prism: <http://prismstandard.org/namespaces/basic/2.0> .
##  @prefix doco: <http://purl.org/spar/doco/> .
##  @prefix po: <http://www.essepuntato.it/2008/12/pattern#> .
##  @prefix co: <http://purl.org/co/> .
##  @prefix trt: <http://plazi.org/treatment#> .
##  @prefix c4o: <http://purl.org/spar/c4o/> .
##  @prefix dwciri: <http://rs.tdwg.org/dwc/iri/> .
##  @prefix nomen: <http://www.semanticweb.org/dmitriev/ontologies/2013/8/untitled-ontology-6#> .
##  @prefix dwc: <http://rs.tdwg.org/dwc/terms/> .
##  @prefix sro: <http://salt.semanticauthoring.org/ontologies/sro#> .
##  @prefix deo: <http://purl.org/spar/deo/> .
##  pensoft:cd71fd14-85d0-407c-8c7d-92adc2a3a787 {
##  pensoft:cb8e5e41-ba8a-4d48-9001-1df287a64d2d   rdf:type   foaf:Agent ;
##   skos:prefLabel   "Pensoft Publishers" ;
##   pro:holdsRoleInTime   pensoft:041ab01f-7b1d-4397-a15c-31dc7add1c00 .
##  pensoft:041ab01f-7b1d-4397-a15c-31dc7add1c00   rdf:type   pro:RoleInTime ;
##   pro:relatesToDocument   pensoft:6239221b-0077-4811-8368-cd81ad83dcf2 .
##  pensoft:6239221b-0077-4811-8368-cd81ad83dcf2   rdf:type   fabio:Journal ;
##   skos:prefLabel   "Biodiversity Data Journal" ;
##   skos:altLabel   "BDJ" ;
##   fabio:issn   "1314-2836" ;
##   fabio:eIssn   "1314-2828" ;
##   dcterms:publisher   "Pensoft Publishers" ;
##   frbr:hasPart   pensoft:2a50d908-194e-4ce7-876c-2c2e2f61ae90 .
##  pensoft:2a50d908-194e-4ce7-876c-2c2e2f61ae90   rdf:type   fabio:JournalArticle ;
##   skos:prefLabel   "10.3897/BDJ.4.e7713" ;
##   prism:doi   "10.3897/BDJ.4.e7713" ;
##   fabio:hasPublicationYear   "2016"^^xsd:gYear ;
##   dcterms:title   "Two new species of Eretmocerus Haldeman (Hymenoptera: Aphelinidae) parasitizing Al
##   po:contains   pensoft:c8e4be49-9802-4516-97b6-bb1abebe3fce , pensoft:62fcdcad-3783-4631-94e1-5a9f4f
##  pensoft:c8e4be49-9802-4516-97b6-bb1abebe3fce   rdf:type   doco:FrontMatter ;
##   po:contains   pensoft:36d80d3c-e14b-470d-b4b6-9b17548abc25 , pensoft:b7d02d2d-8ee0-4808-82a7-921c2f
##   co:firstItem    [     co:itemContent   pensoft:36d80d3c-e14b-470d-b4b6-9b17548abc25 ;
##   co:nextItem    [     co:itemContent   pensoft:c8e4be49-9802-4516-97b6-bb1abebe3fce  ]   ]  ;
##   frbr:realizationOf   pensoft:fec08ab6-3c4e-4673-828b-808399b58ece , pensoft:82df99ac-9039-42a4-b637
##  pensoft:36d80d3c-e14b-470d-b4b6-9b17548abc25   rdf:type   doco:title ;
##   c4o:hasContent   "Two new species of Eretmocerus Haldeman (Hymenoptera: Aphelinidae) parasitizing A
##   frbr:realizationOf   pensoft:2a9a96c9-c9b0-44bb-9506-cd83d0404930 , pensoft:ee9cd39f-3915-40a1-907
##  pensoft:b7d02d2d-8ee0-4808-82a7-921c2f80be90   rdf:type   sro:Abstract ;
##   frbr:realizationOf   pensoft:9bdf848e-0d07-4b24-b90c-48c77b800f1a , pensoft:a4e9939e-c9bb-4980-8b1a
##  pensoft:62fcdcad-3783-4631-94e1-5a9f4f5d13d7   rdf:type   doco:BodyMatter ;
##   frbr:realizationOf   pensoft:168e76d6-e41b-42d9-a22b-7527ceb17e92 , pensoft:5efdad0d-16c4-4795-ac80
##   po:contains   pensoft:de3b18cf-cef2-4157-b702-7691c758dd6a , pensoft:53ad7d86-e15f-4ee8-9614-0d8e0c
##  pensoft:67cb8b17-0812-4a23-8407-b38cada201eb   rdf:type   doco:BackMatter ;
##   po:contains   pensoft:a2320008-99d4-496b-8efd-40732dd98e8d , pensoft:F2536084 , pensoft:F2537272 ,
##   frbr:realizationOf   pensoft:311e2d44-9818-42dc-857d-b871e76534ce , pensoft:eaa293fc-f50a-4d80-b3bc
##  pensoft:a2320008-99d4-496b-8efd-40732dd98e8d   rdf:type   doco:Afterword .
##  pensoft:F2536084   rdf:type   doco:Figure ;
##   po:contains   pensoft:2b123794-1398-47a7-8f26-7fc289d1c8db ;
##   frbr:realizationOf   pensoft:4ad6b03e-ed97-43cc-9b26-070037130ad4 .
##  pensoft:F2537272   rdf:type   doco:Figure ;
##   po:contains   pensoft:9b658586-8d98-434c-acdc-fc2acb8f939b ;
```

```
##   frbr:realizationOf   pensoft:852a4483-d51b-422b-9bb8-29a772059810 .
##  pensoft:F2537278   rdf:type   doco:Figure ;
##   po:contains   pensoft:3778351a-7688-424e-bfe0-0f2bc99093d8 ;
##   frbr:realizationOf   pensoft:cfb75c1d-d157-4c31-bb0d-b7ae469f8a33 .
##  pensoft:F2537280   rdf:type   doco:Figure ;
##   po:contains   pensoft:b9e78752-e9d0-4d99-a7df-3932b403d44f ;
##   frbr:realizationOf   pensoft:1240dc97-d912-448a-96db-d8b4cb2a9799 .
##  pensoft:F2537282   rdf:type   doco:Figure ;
##   po:contains   pensoft:20a1945a-199a-424f-ba3c-4d56304a7dc1 ;
##   frbr:realizationOf   pensoft:b925b527-791c-4341-97ce-2c580529cda2 .
##  pensoft:F2537284   rdf:type   doco:Figure ;
##   po:contains   pensoft:ebb925a9-cfe3-4aef-bb06-ed35e192e7dc ;
##   frbr:realizationOf   pensoft:3797c169-265a-4d38-a259-59036be47f6b .
##  pensoft:F2537286   rdf:type   doco:Figure ;
##   po:contains   pensoft:6e80adea-999d-44bd-9cd5-3fc125b55ddc ;
##   frbr:realizationOf   pensoft:c1557e7f-12c7-4a15-9635-45f0760444cd .
##  pensoft:F2537288   rdf:type   doco:Figure ;
##   po:contains   pensoft:8d8b1d4c-de87-4384-9372-788e84e3fa71 ;
##   frbr:realizationOf   pensoft:71ff3000-2c67-48c5-bee2-4be46a5ad681 .
##  pensoft:F2537290   rdf:type   doco:Figure ;
##   po:contains   pensoft:18d26967-8c3a-4b19-9b54-30a7e7e8109a ;
##   frbr:realizationOf   pensoft:b7df722a-a8f8-4f9b-8895-334b830ae5f7 .
##  pensoft:F2537302   rdf:type   doco:Figure ;
##   po:contains   pensoft:30912e44-2f80-4214-a0a2-1bac357c0000 ;
##   frbr:realizationOf   pensoft:9af34a97-851f-4052-8988-412df5fe8553 .
##  pensoft:F2537304   rdf:type   doco:Figure ;
##   po:contains   pensoft:ee87eecf-a1b5-4f23-90c1-eb961bd8d7ad ;
##   frbr:realizationOf   pensoft:f3122956-c9b2-41b3-91c6-4a80390a19ba .
##  pensoft:2b123794-1398-47a7-8f26-7fc289d1c8db   rdf:type   deo:Caption ;
##   c4o:hasContent   "Eretmocerus garrywardi female antenna" ;
##   frbr:realizationOf   pensoft:26db756f-8e2c-4cf0-a2ab-a3aa9288e8f9 .
##  pensoft:9b658586-8d98-434c-acdc-fc2acb8f939b   rdf:type   deo:Caption ;
##   c4o:hasContent   "Eretmocerus garrywardi head, front view" ;
##   frbr:realizationOf   pensoft:1ba4d29a-9a87-416f-8dc2-3706c6f719b7 .
##  pensoft:3778351a-7688-424e-bfe0-0f2bc99093d8   rdf:type   deo:Caption ;
##   c4o:hasContent   "Eretmocerus garrywardi head, posterior view" ;
##   frbr:realizationOf   pensoft:77ec3cff-3eb7-44fe-8daa-5152b9a86db9 .
##  pensoft:b9e78752-e9d0-4d99-a7df-3932b403d44f   rdf:type   deo:Caption ;
##   c4o:hasContent   "Eretmocerus garrywardi dorsal mesosoma excluding pronotum" ;
##   frbr:realizationOf   pensoft:65bd82a6-4d76-45d0-b0df-d4da73d8a181 .
##  pensoft:20a1945a-199a-424f-ba3c-4d56304a7dc1   rdf:type   deo:Caption ;
##   c4o:hasContent   "Eretmocerus garrywardi ovipositor" ;
##   frbr:realizationOf   pensoft:d3331f6b-8b1a-4236-84cc-6a7e8b699565 .
##  pensoft:ebb925a9-cfe3-4aef-bb06-ed35e192e7dc   rdf:type   deo:Caption ;
##   c4o:hasContent   "Eretmocerus garrywardi fore wing" ;
##   frbr:realizationOf   pensoft:566a3075-ff7f-4171-af3a-5e1efe2c01ff .
##  pensoft:6e80adea-999d-44bd-9cd5-3fc125b55ddc   rdf:type   deo:Caption ;
##   c4o:hasContent   "Eretmocerus liangyihchoui female antenna" ;
##   frbr:realizationOf   pensoft:1632891e-c2f7-45b6-8cff-9e71b0e3ecd0 .
##  pensoft:8d8b1d4c-de87-4384-9372-788e84e3fa71   rdf:type   deo:Caption ;
##   c4o:hasContent   "Eretmocerus liangyihchoui head, right half front view, left half posterior view"
##   frbr:realizationOf   pensoft:3f603720-6f7c-400c-a698-370473b3cbe5 .
##  pensoft:18d26967-8c3a-4b19-9b54-30a7e7e8109a   rdf:type   deo:Caption ;
##   c4o:hasContent   "Eretmocerus liangyihchoui dorsal mesosoma, excluding pronotum" ;
```

```
##   frbr:realizationOf   pensoft:6c825cb1-c3da-45c3-b543-518cc996c759 .
##  pensoft:30912e44-2f80-4214-a0a2-1bac357c0000   rdf:type   deo:Caption ;
##   c4o:hasContent   "Eretmocerus liangyihchoui ovipositor" ;
##   frbr:realizationOf   pensoft:d9d54e9a-636d-44d0-9c48-2f04c6fc1713 .
##  pensoft:ee87eecf-a1b5-4f23-90c1-eb961bd8d7ad   rdf:type   deo:Caption ;
##   c4o:hasContent   "Eretmocerus liangyihchoui fore wing" ;
##   frbr:realizationOf   pensoft:493a091a-690c-48b8-9297-635103e8ee8a .
##  pensoft:65a55c3b-1484-45e0-ba62-0bfe4a04483f   rdf:type   doco:BibliographicReferenceList ;
##   frbr:realizationOf   pensoft:61b33e3b-ba9f-43d0-8365-0ee915180185 , pensoft:6818aa12-0b25-4581-824
##  pensoft:B3040396   rdf:type   doco:Reference ;
##   frbr:realizationOf   pensoft:6374e9c8-e272-4be4-86d0-cff271242efc .
##  pensoft:B2487906   rdf:type   doco:Reference ;
##   frbr:realizationOf   pensoft:290419f7-8e88-4622-bc6a-02c22fb09d27 , pensoft:61d2f64f-00f0-4531-b49
##  pensoft:B2487894   rdf:type   doco:Reference ;
##   frbr:realizationOf   pensoft:b45b033e-cf38-4a7a-a09d-4456be9e1de8 , pensoft:f06c0914-63a1-4420-b9b
##  pensoft:2a9a96c9-c9b0-44bb-9506-cd83d0404930   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:f2a2705e-739a-4ad1-beaf-b0a4f9fb42f9 .
##  pensoft:ee9cd39f-3915-40a1-907c-cbd2b7353d40   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:a094d6b2-d5a5-49a5-8a8d-f3d0d8a064d7 .
##  pensoft:3c0e5264-c54d-4acb-aceb-bb78333f6a83   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:1397519b-8c72-4f82-9cf0-3a4eecce6c08 .
##  pensoft:8720015b-4156-4393-9dda-716d1695f0dd   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:262ed70a-1ac4-47a6-a63b-6831df58a726 .
##  pensoft:2b0bb255-b37e-46a6-9db5-2d881420873c   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:74adfa4e-79da-44cc-8cbe-77eb5b268e49 .
##  pensoft:ee654d4c-0d72-4555-9122-acabe5665bc7   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:cd6f38a4-0f78-4218-80f1-62a39d0bb614 .
##  pensoft:a126608e-d4a3-46c8-b7b0-6ef212af7329   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:5152cbf0-46d4-4efb-bf9d-0352c2f50012 .
##  pensoft:9bdf848e-0d07-4b24-b90c-48c77b800f1a   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:f2a2705e-739a-4ad1-beaf-b0a4f9fb42f9 .
##  pensoft:a4e9939e-c9bb-4980-8b1a-a7a61d957c3e   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:f2a2705e-739a-4ad1-beaf-b0a4f9fb42f9 .
##  pensoft:47d7c25e-4452-49a2-b0cb-a746546764a5   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:df7a71ea-0b3b-43b0-91e6-418e12f2a87f .
##  pensoft:0e26465a-b373-4922-b1bb-5a14210ee8c6   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:97fed37e-291a-4bc1-be34-fbed29a31ed3 .
##  pensoft:3e07ef09-08cb-44da-895a-e44373b3e05a   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:262ed70a-1ac4-47a6-a63b-6831df58a726 .
##  pensoft:a16c196e-2100-4ad5-b6a4-a32c0f831349   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:74adfa4e-79da-44cc-8cbe-77eb5b268e49 .
##  pensoft:f2d378c4-3005-42c7-8a93-2b73c71faf66   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:f2a2705e-739a-4ad1-beaf-b0a4f9fb42f9 .
##  pensoft:fec08ab6-3c4e-4673-828b-808399b58ece   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:f2a2705e-739a-4ad1-beaf-b0a4f9fb42f9 .
##  pensoft:82df99ac-9039-42a4-b637-fd7ad5aba346   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:a094d6b2-d5a5-49a5-8a8d-f3d0d8a064d7 .
##  pensoft:c54324cd-8372-4bea-b51b-62e4c249d6f6   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:1397519b-8c72-4f82-9cf0-3a4eecce6c08 .
##  pensoft:0234bc57-df36-4e3a-8f0a-000b7efc83e3   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:262ed70a-1ac4-47a6-a63b-6831df58a726 .
##  pensoft:5804aec8-9284-45ff-9c94-e062bb261c19   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:74adfa4e-79da-44cc-8cbe-77eb5b268e49 .
##  pensoft:972105bb-c917-4cf7-99cd-b0aaaf9af077   rdf:type   trt:TaxonNameUsage ;
```

```
##   dwciri:scientificName   pensoft:cd6f38a4-0f78-4218-80f1-62a39d0bb614 .
##  pensoft:1af1e91d-4e90-4b55-9406-4eb6f85555e8   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:5152cbf0-46d4-4efb-bf9d-0352c2f50012 .
##  pensoft:36d6eed9-4156-4d06-b53e-5227b61ab34c   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:f2a2705e-739a-4ad1-beaf-b0a4f9fb42f9 .
##  pensoft:b62e43b9-bff7-4ae3-b1b1-82d6df0aacc7   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:f2a2705e-739a-4ad1-beaf-b0a4f9fb42f9 .
##  pensoft:4cbfe35e-e74c-483b-b3df-691b0a82616d   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:df7a71ea-0b3b-43b0-91e6-418e12f2a87f .
##  pensoft:cde64bb5-be0a-4813-9be3-563b5d4962a4   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:97fed37e-291a-4bc1-be34-fbed29a31ed3 .
##  pensoft:0cca2071-0659-4b5e-940b-1d95ab0d94f0   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:262ed70a-1ac4-47a6-a63b-6831df58a726 .
##  pensoft:8e22210e-721e-47b2-8ff5-e95a21a1e4ab   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:74adfa4e-79da-44cc-8cbe-77eb5b268e49 .
##  pensoft:dd5ab060-f389-429e-b96a-47eab9ec6a49   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:f2a2705e-739a-4ad1-beaf-b0a4f9fb42f9 .
##  pensoft:ae5b2bff-fe45-411a-a6e2-515bdeb88bdf   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:4edef348-340d-4462-9520-c8437e0d6e53 .
##  pensoft:4ad6b03e-ed97-43cc-9b26-070037130ad4   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:df7a71ea-0b3b-43b0-91e6-418e12f2a87f .
##  pensoft:852a4483-d51b-422b-9bb8-29a772059810   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:df7a71ea-0b3b-43b0-91e6-418e12f2a87f .
##  pensoft:cfb75c1d-d157-4c31-bb0d-b7ae469f8a33   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:df7a71ea-0b3b-43b0-91e6-418e12f2a87f .
##  pensoft:1240dc97-d912-448a-96db-d8b4cb2a9799   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:df7a71ea-0b3b-43b0-91e6-418e12f2a87f .
##  pensoft:b925b527-791c-4341-97ce-2c580529cda2   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:df7a71ea-0b3b-43b0-91e6-418e12f2a87f .
##  pensoft:3797c169-265a-4d38-a259-59036be47f6b   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:df7a71ea-0b3b-43b0-91e6-418e12f2a87f .
##  pensoft:c1557e7f-12c7-4a15-9635-45f0760444cd   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:97fed37e-291a-4bc1-be34-fbed29a31ed3 .
##  pensoft:71ff3000-2c67-48c5-bee2-4be46a5ad681   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:97fed37e-291a-4bc1-be34-fbed29a31ed3 .
##  pensoft:b7df722a-a8f8-4f9b-8895-334b830ae5f7   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:97fed37e-291a-4bc1-be34-fbed29a31ed3 .
##  pensoft:9af34a97-851f-4052-8988-412df5fe8553   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:97fed37e-291a-4bc1-be34-fbed29a31ed3 .
##  pensoft:f3122956-c9b2-41b3-91c6-4a80390a19ba   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:97fed37e-291a-4bc1-be34-fbed29a31ed3 .
##  pensoft:61b33e3b-ba9f-43d0-8365-0ee915180185   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:b42cdb9a-b778-43dc-92c0-9c3676f1229e .
##  pensoft:6818aa12-0b25-4581-8249-c7409555f11e   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:25b3245c-275d-40ac-969b-d16ef211cb66 .
##  pensoft:ba82d27b-6367-4e01-bab4-c8b0d341a46c   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:a094d6b2-d5a5-49a5-8a8d-f3d0d8a064d7 .
##  pensoft:3ac9ce9a-b3cc-4658-ab19-61f1780cd4c3   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:1397519b-8c72-4f82-9cf0-3a4eecce6c08 .
##  pensoft:2a706e35-f720-43eb-9f02-84aa1eae2910   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:47793a89-0f6d-4447-8659-383144fc34be .
##  pensoft:5ab7fbda-4b05-437f-9eaa-e30b525b819f   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:0135e112-014b-4f1b-ad84-7e1f981a62ae .
##  pensoft:b38c410e-a35f-4c2f-8bf6-61e381ef25b7   rdf:type   trt:TaxonNameUsage ;
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##   dwciri:scientificName   pensoft:5152cbf0-46d4-4efb-bf9d-0352c2f50012 .
##  pensoft:0e002cff-b09e-48fb-8739-ce55515d888f   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:f2a2705e-739a-4ad1-beaf-b0a4f9fb42f9 .
##  pensoft:6072153b-7963-42af-bc91-3cc57d0c6452   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:a094d6b2-d5a5-49a5-8a8d-f3d0d8a064d7 .
##  pensoft:f589fcb4-fe13-476f-a6e4-fbaceeaa3e95   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:1397519b-8c72-4f82-9cf0-3a4eecce6c08 .
##  pensoft:6868e537-8b91-4b6f-8108-841090f2e927   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:a7699af1-7160-42cf-95e1-51048bb53201 .
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##   dwciri:scientificName   pensoft:47e0a0bc-d6cf-41c9-b1b6-d7dd2283eafc .
##  pensoft:47544640-324e-4edc-88cf-17238f2d79a2   rdf:type   trt:TaxonNameUsage ;
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##  pensoft:d9354de3-c993-4fe5-bcf9-c7f24b6d3eb8   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:5152cbf0-46d4-4efb-bf9d-0352c2f50012 .
##  pensoft:6374e9c8-e272-4be4-86d0-cff271242efc   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:b42cdb9a-b778-43dc-92c0-9c3676f1229e .
##  pensoft:290419f7-8e88-4622-bc6a-02c22fb09d27   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:25b3245c-275d-40ac-969b-d16ef211cb66 .
##  pensoft:61d2f64f-00f0-4531-b49a-e2dd13838c95   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:a094d6b2-d5a5-49a5-8a8d-f3d0d8a064d7 .
##  pensoft:a1b5f4ac-ce16-4bec-8765-7c6a637d8fa2   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:1397519b-8c72-4f82-9cf0-3a4eecce6c08 .
##  pensoft:abdec342-d2f2-40cf-9231-3e4e5fc9cd94   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:47793a89-0f6d-4447-8659-383144fc34be .
##  pensoft:1977ea8a-6f5e-4fcd-a45f-428ce11bff63   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:0135e112-014b-4f1b-ad84-7e1f981a62ae .
##  pensoft:d3aed34a-a8f4-4d56-9adf-322a8ae656ba   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:5152cbf0-46d4-4efb-bf9d-0352c2f50012 .
##  pensoft:b45b033e-cf38-4a7a-a09d-4456be9e1de8   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:f2a2705e-739a-4ad1-beaf-b0a4f9fb42f9 .
##  pensoft:f06c0914-63a1-4420-b9b9-9b087e10f9e5   rdf:type   trt:TaxonNameUsage ;
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##   dwciri:scientificName   pensoft:1397519b-8c72-4f82-9cf0-3a4eecce6c08 .
##  pensoft:79cae4f2-35f6-4508-b38d-da4224ae5c2b   rdf:type   trt:TaxonNameUsage ;
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##  pensoft:e455f5d7-fa5c-4f39-9015-476d3ed1774b   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:47e0a0bc-d6cf-41c9-b1b6-d7dd2283eafc .
##  pensoft:8c72c461-1902-4c23-bcf6-b66bb5cb9c29   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:cd6f38a4-0f78-4218-80f1-62a39d0bb614 .
##  pensoft:35f3288c-ab97-45dc-b621-86a89d68c8c6   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:5152cbf0-46d4-4efb-bf9d-0352c2f50012 .
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##   dwciri:scientificName   pensoft:a094d6b2-d5a5-49a5-8a8d-f3d0d8a064d7 .
##  pensoft:d7899a73-4d23-448d-b5db-31cb7cc665c6   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:1397519b-8c72-4f82-9cf0-3a4eecce6c08 .
##  pensoft:2bd6fea8-227c-42f9-b6bd-fcb66cc30806   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:47793a89-0f6d-4447-8659-383144fc34be .
##  pensoft:568c01a6-96d4-438a-ab4f-10031ad69391   rdf:type   trt:TaxonNameUsage ;
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##   dwciri:scientificName   pensoft:0135e112-014b-4f1b-ad84-7e1f981a62ae .
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##   dwciri:scientificName   pensoft:5152cbf0-46d4-4efb-bf9d-0352c2f50012 .
##  pensoft:9ce84517-8739-4021-bf8a-bfbc8f9bce67   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:f2a2705e-739a-4ad1-beaf-b0a4f9fb42f9 .
##  pensoft:33cb03e3-4c87-44f1-9659-53e300ec9044   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:a094d6b2-d5a5-49a5-8a8d-f3d0d8a064d7 .
##  pensoft:dc227240-d1be-49ad-802b-d94b9faf1f4e   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:1397519b-8c72-4f82-9cf0-3a4eecce6c08 .
##  pensoft:9cac7177-159f-4931-bb6f-c147f7c2ff80   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:a7699af1-7160-42cf-95e1-51048bb53201 .
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##  pensoft:06a9347a-2554-45b2-b01e-df713694cbc9   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:cd6f38a4-0f78-4218-80f1-62a39d0bb614 .
##  pensoft:f961fae4-f605-48e6-81b9-f367ea08d34d   rdf:type   trt:TaxonNameUsage ;
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##   dwciri:scientificName   pensoft:f2a2705e-739a-4ad1-beaf-b0a4f9fb42f9 .
##  pensoft:5efdad0d-16c4-4795-ac80-abb971f99c75   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:f2a2705e-739a-4ad1-beaf-b0a4f9fb42f9 .
##  pensoft:f0c6f267-8e77-49c7-95c7-6cac45db6850   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:f2a2705e-739a-4ad1-beaf-b0a4f9fb42f9 .
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##  pensoft:7e0b329f-31fd-430a-a70b-718f3b54a610   rdf:type   trt:TaxonNameUsage ;
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##  pensoft:045af5af-76e7-4330-a220-bcac0d98eefb   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:9cd81647-a8ea-4a9a-99d8-255de873348a .
##  pensoft:0a3273f3-31c1-49cd-8ea4-9403617a9d27   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:df7a71ea-0b3b-43b0-91e6-418e12f2a87f .
##  pensoft:f593b7c7-a261-4604-9bab-68b4abd860f9   rdf:type   trt:TaxonNameUsage ;
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##  pensoft:79970478-03ed-455b-9350-bfa7f3c95869   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:aebeea84-ad24-4a85-9548-ece9f7e107ca .
##  pensoft:f7059224-b011-4731-bab4-021f9a71cd6d   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:df7a71ea-0b3b-43b0-91e6-418e12f2a87f .
##  pensoft:0733f618-3211-47c7-bfd9-e2adffd809a8   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:167aa701-a7a0-40b1-a69b-cc8e448785cb .
##  pensoft:4e6d0a4d-da55-4dad-81e0-fe40f646b2bd   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:aebeea84-ad24-4a85-9548-ece9f7e107ca .
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##   dwciri:scientificName   pensoft:df7a71ea-0b3b-43b0-91e6-418e12f2a87f .
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##   dwciri:scientificName   pensoft:167aa701-a7a0-40b1-a69b-cc8e448785cb .
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##   dwciri:scientificName   pensoft:df7a71ea-0b3b-43b0-91e6-418e12f2a87f .
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##   dwciri:scientificName   pensoft:df7a71ea-0b3b-43b0-91e6-418e12f2a87f .
##  pensoft:8e160f37-c062-4c49-9371-e0e3aa32bcb6   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:cd6f38a4-0f78-4218-80f1-62a39d0bb614 .
##  pensoft:a718c205-05fb-41f7-8dc4-82aebcc66dc6   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:5152cbf0-46d4-4efb-bf9d-0352c2f50012 .
##  pensoft:6951d196-ccba-4f58-9ab8-a0cfe15daac5   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:74adfa4e-79da-44cc-8cbe-77eb5b268e49 .
##  pensoft:bc269fc6-5f3a-4bcb-b51b-b6bfa1f9e805   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:4edef348-340d-4462-9520-c8437e0d6e53 .
##  pensoft:67804fdf-277d-4de8-8a97-7fcdbf3b19cc   rdf:type   trt:TaxonNameUsage ;
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##  pensoft:94ca97b6-aa1b-4745-9e99-dbc4c14bc57c   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:262ed70a-1ac4-47a6-a63b-6831df58a726 .
##  pensoft:270c8df0-d979-4cf1-9a82-180b66474073   rdf:type   trt:TaxonNameUsage ;
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##  pensoft:5a429756-224b-47da-aed3-5325d2b83289   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:97fed37e-291a-4bc1-be34-fbed29a31ed3 .
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##   dwciri:scientificName   pensoft:b9be27a9-a9c1-4b6a-a8c3-861ecb0d8a62 .
##  pensoft:63c1169d-65db-483a-b70f-b1bd8b014638   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:97fed37e-291a-4bc1-be34-fbed29a31ed3 .
##  pensoft:dfaa1cae-afd9-454e-9849-54d6bcb165ce   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:29a2d3ad-7c63-47a5-a4eb-4f89bcb1cb58 .
##  pensoft:1e2d4b0a-96fc-47c6-b236-8a430cab8426   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:2b1f24c2-6a7e-4d24-938f-67f2efd2dcd4 .
##  pensoft:798ad8bf-2732-4eb2-99e8-835675a3c790   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:97fed37e-291a-4bc1-be34-fbed29a31ed3 .
##  pensoft:ba1f9721-661f-4e78-a0ec-6b1a3ba059de   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:29a2d3ad-7c63-47a5-a4eb-4f89bcb1cb58 .
##  pensoft:8388d98f-701b-4469-8ec9-fa995b2a3de0   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:0639f616-d9b5-4c01-9b96-5d39f597f215 .
##  pensoft:66e1a8a0-42d4-4751-8a6a-ef27a5d5439b   rdf:type   trt:TaxonNameUsage ;
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##   dwciri:scientificName   pensoft:97fed37e-291a-4bc1-be34-fbed29a31ed3 .
##  pensoft:e98304de-441d-4b13-b0ab-d873ae852b3d   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:29a2d3ad-7c63-47a5-a4eb-4f89bcb1cb58 .
##  pensoft:60983bf4-e8c2-42c6-b5ca-e6d2ab121389   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:0639f616-d9b5-4c01-9b96-5d39f597f215 .
##  pensoft:b4006a02-fbc8-4ef8-9f21-68dc049269e4   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:97fed37e-291a-4bc1-be34-fbed29a31ed3 .
##  pensoft:a122d1ad-8cd7-44c9-bab2-48e8841641e6   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:29a2d3ad-7c63-47a5-a4eb-4f89bcb1cb58 .
##  pensoft:95e5cfcc-9c74-480b-ba86-2b1b2754bfad   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:0639f616-d9b5-4c01-9b96-5d39f597f215 .
##  pensoft:73761923-79d5-4da0-b3bc-ceca89381799   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:97fed37e-291a-4bc1-be34-fbed29a31ed3 .
##  pensoft:d1129390-836c-4bbe-a863-9fb251bfe38c   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:29a2d3ad-7c63-47a5-a4eb-4f89bcb1cb58 .
##  pensoft:f9d115c4-8734-4118-8354-2646eb11d394   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:6bb687ed-11bc-4dee-9c0d-7bcc0c08825f .
##  pensoft:3e2e368e-c316-4c44-89de-b916820f0868   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:97fed37e-291a-4bc1-be34-fbed29a31ed3 .
##  pensoft:223d508f-d3a3-47a6-970c-30ce098ab6db   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:29a2d3ad-7c63-47a5-a4eb-4f89bcb1cb58 .
##  pensoft:74440012-2450-4280-9720-851a7d4defb1   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:3d980983-feb2-4b73-b4ef-77b459b5113a .
##  pensoft:a5ef53ea-8129-449b-b7d8-00390a876f4c   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:97fed37e-291a-4bc1-be34-fbed29a31ed3 .
##  pensoft:b5a9f383-f1bc-495e-8465-482b66108522   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:29a2d3ad-7c63-47a5-a4eb-4f89bcb1cb58 .
##  pensoft:92691b56-32b0-4940-83ee-2cb291cf2575   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:3d980983-feb2-4b73-b4ef-77b459b5113a .
##  pensoft:d3238a3c-cd34-4a76-a209-ee6124e13aad   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:97fed37e-291a-4bc1-be34-fbed29a31ed3 .
##  pensoft:e250d1a4-1d11-43e9-be6f-2b76be142aa2   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:29a2d3ad-7c63-47a5-a4eb-4f89bcb1cb58 .
##  pensoft:ae5331e6-c1f0-4de4-85a3-0669d47f90fc   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:3d980983-feb2-4b73-b4ef-77b459b5113a .
##  pensoft:0064f29c-4876-4573-87e7-6245dc4b941b   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:0639f616-d9b5-4c01-9b96-5d39f597f215 .
##  pensoft:2443f05e-6e39-4588-a2fd-8033f541f4f5   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:97fed37e-291a-4bc1-be34-fbed29a31ed3 .
##  pensoft:1587723b-0911-412d-aeb0-41edfa24ef0c   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:29a2d3ad-7c63-47a5-a4eb-4f89bcb1cb58 .
##  pensoft:b5fde3e0-b11b-4d79-a3bc-ed3759c1cbf5   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:3d980983-feb2-4b73-b4ef-77b459b5113a .
##  pensoft:453c9b58-606b-4beb-9526-c7f7ada1544c   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:97fed37e-291a-4bc1-be34-fbed29a31ed3 .
##  pensoft:30f8d3b0-0701-4eac-9f9f-008bdf949f5c   rdf:type   trt:TaxonNameUsage ;
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##  pensoft:44fd6b61-baa4-4997-bb63-b349f2af5b33   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:0639f616-d9b5-4c01-9b96-5d39f597f215 .
##  pensoft:59d07421-128a-4394-86ad-b15da1ef3fbe   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:97fed37e-291a-4bc1-be34-fbed29a31ed3 .
##  pensoft:853df12d-60c9-4c5c-abcb-3eb6d2472175   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:29a2d3ad-7c63-47a5-a4eb-4f89bcb1cb58 .
##  pensoft:86616fa6-fead-4951-9afb-828ef2a4ed5d   rdf:type   trt:TaxonNameUsage ;
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##   dwciri:scientificName   pensoft:3d980983-feb2-4b73-b4ef-77b459b5113a .
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##   dwciri:scientificName   pensoft:97fed37e-291a-4bc1-be34-fbed29a31ed3 .
##  pensoft:347c763c-fcf7-463a-8d1c-841130326261   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:29a2d3ad-7c63-47a5-a4eb-4f89bcb1cb58 .
##  pensoft:2020160c-d3ec-41e4-b40d-f6acb11cf3ee   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:3993cd1c-a8bb-4768-8238-7f19a8754056 .
##  pensoft:cc07ed57-2741-4d05-bd0c-7d7c702bda82   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:97fed37e-291a-4bc1-be34-fbed29a31ed3 .
##  pensoft:8fd2d779-9af6-4c38-b6ae-b3f0a33e7c9a   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:29a2d3ad-7c63-47a5-a4eb-4f89bcb1cb58 .
##  pensoft:1e090a52-83cb-435a-a917-18984bb70108   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:3d980983-feb2-4b73-b4ef-77b459b5113a .
##  pensoft:81cbabf1-9324-4688-9d95-e9b8cbca1625   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:97fed37e-291a-4bc1-be34-fbed29a31ed3 .
##  pensoft:0abe97e8-c71b-4c15-83dd-01032642b0ed   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:29a2d3ad-7c63-47a5-a4eb-4f89bcb1cb58 .
##  pensoft:f8416f8a-7c12-4589-aae8-f71e68c65ac7   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:81c39349-4b60-42d2-996f-f9f5d1aeda07 .
##  pensoft:f2901cbe-80e3-469f-9c32-7ff52f0e7919   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:97fed37e-291a-4bc1-be34-fbed29a31ed3 .
##  pensoft:dcaa7ed4-0b99-480e-adc0-b59565a4f47c   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:3c4dba3f-955c-4746-899e-c8c6e8e35508 .
##  pensoft:c6467bee-7b0c-4986-801b-cf58278cd526   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:5bc964ce-cebd-4961-914b-b6664cd4e1f3 .
##  pensoft:a56116a8-b58a-4e9f-afb9-7648eabb2b14   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:97fed37e-291a-4bc1-be34-fbed29a31ed3 .
##  pensoft:3c93699c-0d3d-4d2a-8472-782196eb093f   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:29a2d3ad-7c63-47a5-a4eb-4f89bcb1cb58 .
##  pensoft:7665c985-8416-4ac9-9235-5795169b8e4d   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:0639f616-d9b5-4c01-9b96-5d39f597f215 .
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##   dwciri:scientificName   pensoft:97fed37e-291a-4bc1-be34-fbed29a31ed3 .
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##   dwciri:scientificName   pensoft:29a2d3ad-7c63-47a5-a4eb-4f89bcb1cb58 .
##  pensoft:de1e41a2-352c-4d8a-b25a-d1fe8eab679f   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:84d4e901-7398-458c-9ccf-e47df574b7d1 .
##  pensoft:714e0cb6-2d32-4176-bd22-022c6638dda3   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:97fed37e-291a-4bc1-be34-fbed29a31ed3 .
##  pensoft:603dafb7-b79d-4b1f-b4b8-34dc4f9bc3fc   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:29a2d3ad-7c63-47a5-a4eb-4f89bcb1cb58 .
##  pensoft:3ed84e65-20e5-45fe-932b-03476ffaaf03   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:e6c0c360-1b18-4b9f-b566-f93636e51185 .
##  pensoft:dc50cf3e-6462-40c5-be9c-b403b34cb565   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:97fed37e-291a-4bc1-be34-fbed29a31ed3 .
##  pensoft:b2046be6-6789-48e4-8502-13d571da7dd3   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:29a2d3ad-7c63-47a5-a4eb-4f89bcb1cb58 .
##  pensoft:06b58b87-0246-4224-9ccb-977a7e008577   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:e6c0c360-1b18-4b9f-b566-f93636e51185 .
##  pensoft:1f792b20-3ea5-4499-b4c4-070b8e44a662   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:97fed37e-291a-4bc1-be34-fbed29a31ed3 .
##  pensoft:47278ca6-1f31-422e-aac3-02a8591ce2c6   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:29a2d3ad-7c63-47a5-a4eb-4f89bcb1cb58 .
##  pensoft:36aec2ad-7795-4fa1-9f87-1bb585586b93   rdf:type   trt:TaxonNameUsage ;
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##   dwciri:scientificName   pensoft:3993cd1c-a8bb-4768-8238-7f19a8754056 .
##  pensoft:e1806112-081b-4729-8f6d-5418121b0623   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:97fed37e-291a-4bc1-be34-fbed29a31ed3 .
##  pensoft:1b4fc2d9-2d38-495e-9948-eb3e13bae925   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:29a2d3ad-7c63-47a5-a4eb-4f89bcb1cb58 .
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##   dwciri:scientificName   pensoft:3993cd1c-a8bb-4768-8238-7f19a8754056 .
##  pensoft:3aa0411c-d82c-4971-9cbc-871a796da252   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:97fed37e-291a-4bc1-be34-fbed29a31ed3 .
##  pensoft:bed6b505-df17-4c2c-a8b7-26c970fcea3b   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:97fed37e-291a-4bc1-be34-fbed29a31ed3 .
##  pensoft:2556d1d6-fad7-4e04-a9bd-ab9adf7db599   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:1f9c1c7d-bdf3-4a14-bf57-15062d552e0c .
##  pensoft:ff21d218-a80c-4729-abab-1315c46ecab5   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:1397519b-8c72-4f82-9cf0-3a4eecce6c08 .
##  pensoft:acb10252-ab94-4091-b6a0-76cb1a57785a   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:cd6f38a4-0f78-4218-80f1-62a39d0bb614 .
##  pensoft:06941e19-52cd-445a-a11a-c26b392fbedf   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:5152cbf0-46d4-4efb-bf9d-0352c2f50012 .
##  pensoft:15791d52-4580-4f59-a0b9-a5c4e80a9973   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:262ed70a-1ac4-47a6-a63b-6831df58a726 .
##  pensoft:6eb6f3cd-7553-43ed-82a3-769087b0a3b1   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:f2a2705e-739a-4ad1-beaf-b0a4f9fb42f9 .
##  pensoft:cc53989f-8e2e-4d67-b0b4-eab75b8a4337   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:6a8701b8-1dc1-413c-b77d-aa00cb7a0d71 .
##  pensoft:612f20dc-3afc-4a6d-9ea0-90434fd7d265   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:d3ce81a0-3577-4a57-adc6-257733a00e03 .
##  pensoft:f7ec2cf5-7fd4-478f-abe2-f4d9c35d5ea0   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:71404edd-a581-4864-9f08-1b14eaa50ecc .
##  pensoft:8483ca3d-59aa-4e45-a6a3-a9d38947c8fc   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:66f12a89-643b-494c-a612-d9f462d21a71 .
##  pensoft:eef0632b-5859-4db4-b9ca-61574bc4e004   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:3b7afaaa-3832-4272-a130-fc25e77e7af4 .
##  pensoft:157796c1-bb3a-4b24-9480-eabcb9d36015   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:2640472b-84f3-4d2d-b45f-324ee7147157 .
##  pensoft:154d4c62-0607-4946-8a34-efd6335bc03a   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:58db1790-74bd-4a61-a88f-e53deeed5556 .
##  pensoft:64ced3b6-376b-4728-8b23-8d854b7e385f   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:700c0e75-dd9e-4d46-860a-482bec07cb0f .
##  pensoft:b51d9f40-2120-4d93-b068-c66ae6444936   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:3cad41f1-bd4e-4d86-88a6-822d9a33e463 .
##  pensoft:11633202-635c-48d0-b50b-44281005dcef   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:fdd8c3c6-6431-4a5c-8854-ee41712734f0 .
##  pensoft:c689286b-fb55-4445-8e70-d712fb9a4da2   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:bc37cf00-b7f1-4ceb-9738-820c3409fa15 .
##  pensoft:cfb6f00f-80b1-4b9d-ae49-639e69304a00   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:8034b6f2-ebb0-4976-8bb4-c6f302460f69 .
##  pensoft:6ba94b3a-9dc7-429d-8303-8d104aafac96   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:eaac1df3-d70c-47e8-95d5-3d1c4b93d1d8 .
##  pensoft:de3b18cf-cef2-4157-b702-7691c758dd6a   frbr:realizationOf   pensoft:260863ff-3d2d-4d7a-84ea
##   rdf:type   trt:Nomenclature .
##  pensoft:260863ff-3d2d-4d7a-84ea-fe0fcc15d39b   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:7aa6e438-3c2b-4db9-b58f-3b015d82e721 .
##  pensoft:53ad7d86-e15f-4ee8-9614-0d8e0e2f2e51   frbr:realizationOf   pensoft:fea5b300-0a19-4fd8-ab3f
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##   rdf:type   trt:Nomenclature .
##  pensoft:fea5b300-0a19-4fd8-ab3f-a130c4beefab   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:b84bb426-f605-4c20-9fc0-4cb2e8435453 .
##  pensoft:26db756f-8e2c-4cf0-a2ab-a3aa9288e8f9   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:df7a71ea-0b3b-43b0-91e6-418e12f2a87f .
##  pensoft:1ba4d29a-9a87-416f-8dc2-3706c6f719b7   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:df7a71ea-0b3b-43b0-91e6-418e12f2a87f .
##  pensoft:77ec3cff-3eb7-44fe-8daa-5152b9a86db9   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:df7a71ea-0b3b-43b0-91e6-418e12f2a87f .
##  pensoft:65bd82a6-4d76-45d0-b0df-d4da73d8a181   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:df7a71ea-0b3b-43b0-91e6-418e12f2a87f .
##  pensoft:d3331f6b-8b1a-4236-84cc-6a7e8b699565   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:df7a71ea-0b3b-43b0-91e6-418e12f2a87f .
##  pensoft:566a3075-ff7f-4171-af3a-5e1efe2c01ff   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:df7a71ea-0b3b-43b0-91e6-418e12f2a87f .
##  pensoft:1632891e-c2f7-45b6-8cff-9e71b0e3ecd0   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:97fed37e-291a-4bc1-be34-fbed29a31ed3 .
##  pensoft:3f603720-6f7c-400c-a698-370473b3cbe5   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:97fed37e-291a-4bc1-be34-fbed29a31ed3 .
##  pensoft:6c825cb1-c3da-45c3-b543-518cc996c759   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:97fed37e-291a-4bc1-be34-fbed29a31ed3 .
##  pensoft:d9d54e9a-636d-44d0-9c48-2f04c6fc1713   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:97fed37e-291a-4bc1-be34-fbed29a31ed3 .
##  pensoft:493a091a-690c-48b8-9297-635103e8ee8a   rdf:type   trt:TaxonNameUsage ;
##   dwciri:scientificName   pensoft:97fed37e-291a-4bc1-be34-fbed29a31ed3 .
##  pensoft:89fe244e-0f0d-4833-a4f0-f261ce27d54f   rdf:type   trt:NomenclaturalAct ;
##   trt:ValidName   pensoft:7aa6e438-3c2b-4db9-b58f-3b015d82e721 .
##  pensoft:741152aa-e50a-4fb8-99c1-efc6d57bf31b   rdf:type   trt:NomenclaturalAct ;
##   trt:ValidName   pensoft:b84bb426-f605-4c20-9fc0-4cb2e8435453 . }
```

Side note: Note that at the moemnt `xml2rdf` *changes state*. It returns the RDF serialization of the XML file and in addition to that extends the knowledge graph with some nodes that are used in the returned turtle. This needed because say a given name "Aus bus" is used somewhere in the text. The sytem tries to resolve and return an identifier for this name in the Knowledge Graph, if the name is not found, the system automatically mints a new identifier and tells it to the Knowledge Graph. Otherwise, the name would not be resolved the next time it appears.

This is at odds with the functional programming paradigm as it mixes logic and state. http://curtclifton.net/papers/MoseleyMarks06a.pdf Better approach will be explained during the seminar.

Now we can submit the Turtle to the system:

```
processing_status = httr::content( rdf4jr::add_data(server_access_options, server_access_options$reposi
```

```
## No encoding supplied: defaulting to UTF-8.
```