

## Patch note

- La récupération des résultats via Corèse n'est possible qu'à travers un graphe (XML). Il serait bien de faire un script Python qui transforme les réponses du graphe en CSV (possible avec Py4J et la Corese-Python-Lib) pour pouvoir faire une vérification minutieuse des résultats. Je proposerai ça à terme, ce qui donnera une base pour le développement d'un "web application" Django.
- Il est difficile de reformuler avec des concepts du thesaurus certains termes des questions (trop précis, pas assez précis, pas d'équivalent direct).

## Préfixes utilisés

```
prefix oa:      <http://www.w3.org/ns/oa#>.
prefix skos:    <http://www.w3.org/2004/02/skos/core#>.
prefix schema:  <http://schema.org/> .
```

## Requêtes statistiques et tests

- Nombre d'annotation et nombre de concept distinct présent

```
PREFIX oa:      <http://www.w3.org/ns/oa#>.
PREFIX skos:    <http://www.w3.org/2004/02/skos/core#>.

select distinct (count(?x) as ?an) (count(distinct ?y) as ?nb) where {
  ?x a oa:Annotation;
    oa:hasBody ?y.
  ?y a skos:Concept
}
```

-> 10601 annotations et 1482 concepts différents

- Top 10 des concepts les plus récurrent

```
PREFIX oa:      <http://www.w3.org/ns/oa#>.
PREFIX skos:    <http://www.w3.org/2004/02/skos/core#>.

select distinct ?label (count(?x) as ?nb) where {
  ?x a oa:Annotation;
    oa:hasBody ?y.
  ?y a skos:Concept; skos:prefLabel ?label.
  filter (lang(?label) = "en")
}
GROUP BY ?label
ORDER BY DESC (?nb)
```

Concept	Occurrence
---------	------------

Concept	Occurrence
"historical character"@en	253
"size"@en	188
"habitat"@en	182
"intellectual authority"@en	178
"nourishment"@en	150
"anecdote"@en	111
"similarity to another animal"@en	111
"female"@en	107
"male"@en	104
"color"@en	103

## Requêtes métiers

### Quels sont les animaux qui construisent un habitat (textes où l'on parle de cette construction)

Reformulation: Les annotations qui mentionnent un animal et une construction d'habitation étant dans le même paragraphe.

Note: généralisation de l'animal faisant parti de la **collection** "Archéotaxon" ("Ancient class" en anglais)

Sortie: Le paragraphe, l'animal (concept), le texte mentionnant l'animal, la construction (concept), le texte mentionnant la construction

```

PREFIX oa:      <http://www.w3.org/ns/oa#>.
PREFIX skos:    <http://www.w3.org/2004/02/skos/core#>.
PREFIX schema:  <http://schema.org/> .

SELECT DISTINCT ?paragraph ?name_animal ?mention_animal ?name_construction ?
mention_construction WHERE {
  ?annotation1 a oa:Annotation;
               oa:hasBody ?animal;
               oa:hasTarget ?target1.
  ?target1 oa:hasSource ?paragraph;
           oa:hasSelector ?selector.

  ?selector oa:exact ?mention_animal.

  ?animal a skos:Concept;
           skos:prefLabel ?name_animal.

  ?animal_collection a skos:Collection;
                     skos:prefLabel "Ancient class"@en;
                     skos:member ?animal.

```

```
?annotation2 oa:hasBody ?construction;
    oa:hasTarget ?target2.
?target2 oa:hasSource ?paragraph;
    oa:hasSelector ?selector2.
?selector2 oa:exact ?mention_construction.

?construction skos:prefLabel ?name_construction;
    skos:broader+ ?construction_generique.
?construction_generique skos:prefLabel "house building"@en.

FILTER (lang(?name_animal) = "en").
FILTER (lang(?name_construction) = "en")
}

ORDER BY ?paragraph
```

### Extrait de réponse de la requête:

?paragraph	?name_animal	?mention_animal	?name_construction	?mention_construction
<http://www.zoomathia.com/PLINE-10-annot/PL10/10/>	"AQUILA"@en	aquilarum	"nest"@en	e nido
<http://www.zoomathia.com/PLINE-10-annot/PL10/100/>	"hen"@en	galinaceos	"nest"@en	spina et frutice sic muniunt receptaculum. ut contra feram abunde valentur.
<http://www.zoomathia.com/PLINE-10-annot/PL10/100/>	"WILD BEAST"@en	ut contra feram	"nest"@en	spina et frutice sic muniunt receptaculum. ut contra feram abunde valentur.
<http://www.zoomathia.com/PLINE-10-annot/PL10/100/>	"quail"@en	colurnices	"nest"@en	spina et frutice sic muniunt receptaculum. ut contra feram abunde valentur.
<http://www.zoomathia.com/PLINE-10-annot/PL10/100/>	"tooster"@en	galinaceos	"nest"@en	spina et frutice sic muniunt receptaculum. ut contra feram abunde valentur.
<http://www.zoomathia.com/PLINE-10-annot/PL10/104/>	"bee eater"@en	merops vocatur qenitores suos reconditos pas.	"nest"@en	nidum
<http://www.zoomathia.com/PLINE-10-annot/PL10/104/>	"partridge"@en	Perdices spina et frutice sic muniunt receptacul.	"nest"@en	nidum
<http://www.zoomathia.com/PLINE-10-annot/PL10/114/>	"swallow"@en	hirundinum specie	"nest"@en	in nido
<http://www.zoomathia.com/PLINE-10-annot/PL10/114/>	"swallow"@en	hirundinum specie	"nest"@en	nidificant in scopulis
<http://www.zoomathia.com/PLINE-10-annot/PL10/126/>	"cataract"@en	juba calaracas vocat. et eis esse dentes oculo	"nest"@en	scrobes excavare rostro. inde crate consternere et operire terra quae ante fuerit.
<http://www.zoomathia.com/PLINE-10-annot/PL10/13/>	"onesion"@en	Tribus primis et quinto aquilarum generi inaedifi.	"nest"@en	Tribus primis et quinto aquilarum generi inaedificatur nido lapis aetles. quem aliqui
<http://www.zoomathia.com/PLINE-10-annot/PL10/13/>	"morphnos"@en	Tribus primis et quinto aquilarum generi inaedifi.	"nest"@en	Tribus primis et quinto aquilarum generi inaedificatur nido lapis aetles. quem aliqui
<http://www.zoomathia.com/PLINE-10-annot/PL10/13/>	"black eagle"@en	Tribus primis et quinto aquilarum generi inaedifi.	"nest"@en	Tribus primis et quinto aquilarum generi inaedificatur nido lapis aetles. quem aliqui
<http://www.zoomathia.com/PLINE-10-annot/PL10/13/>	"WILD BEAST"@en	ne omnium ferarum felus raperentur	"nest"@en	Tribus primis et quinto aquilarum generi inaedificatur nido lapis aetles. quem aliqui
<http://www.zoomathia.com/PLINE-10-annot/PL10/13/>	"vadarus2"@en	Tribus primis et quinto aquilarum generi inaedifi.	"nest"@en	Tribus primis et quinto aquilarum generi inaedificatur nido lapis aetles. quem aliqui
<http://www.zoomathia.com/PLINE-10-annot/PL10/13/>	"bearded vulture"@en	sesi esietos ab <i>his comatunus genus ossifrad.	"nest"@en	Tribus primis et quinto aquilarum generi inaedificatur nido lapis aetles. quem aliqui
<http://www.zoomathia.com/PLINE-10-annot/PL10/19/>	"black vulture"@en	praevalet niri	"nest"@en	uno ex his reliqua ova nidumque lustrare. mox abicere
<http://www.zoomathia.com/PLINE-10-annot/PL10/19/>	"black vulture"@en	praevalet niri	"nest"@en	nidos nemo attigit. ideo et fuere qui putarent illos ex adverso <or>be advolare. fals
<http://www.zoomathia.com/PLINE-10-annot/PL10/19/>	"vulture"@en	Vulturum praevalet niri. nidos nemo attigit. ideo	"nest"@en	uno ex his reliqua ova nidumque lustrare. mox abicere
<http://www.zoomathia.com/PLINE-10-annot/PL10/19/>	"vulture"@en	Vulturum praevalet niri. nidos nemo attigit. ideo	"nest"@en	nidos nemo attigit. ideo et fuere qui putarent illos ex adverso <or>be advolare. fals
<http://www.zoomathia.com/PLINE-10-annot/PL10/204/>	"trochilus"@en	rursus cum tr<och>is<lo> mustela et cornix	"nest"@en	nidos
<http://www.zoomathia.com/PLINE-10-annot/PL10/204/>	"bearded vulture"@en	e<t> harpe. <harpe>	"nest"@en	nidos
<http://www.zoomathia.com/PLINE-10-annot/PL10/204/>	"triorchis"@en	triorchis accipiter	"nest"@en	nidos
<http://www.zoomathia.com/PLINE-10-annot/PL10/204/>	"BIRD"@en	noctuae. [12041] et ceterae minores aves	"nest"@en	nidos
<http://www.zoomathia.com/PLINE-10-annot/PL10/204/>	"phalangium"@en	phalangia ac. aranei	"nest"@en	nidos
<http://www.zoomathia.com/PLINE-10-annot/PL10/204/>	"AC-CIPITERS"@en	triorchis accipiter	"nest"@en	nidos
<http://www.zoomathia.com/PLINE-10-annot/PL10/204/>	"seaquill"@en	 ent<h>-os et oavia e<t> harpe	"nest"@en	nidos
<http://www.zoomathia.com/PLINE-10-annot/PL10/204/>	"ic-ch-neumones vespaes"@en	ic-ch-neumones vespaes	"nest"@en	nidos
<http://www.zoomathia.com/PLINE-10-annot/PL10/204/>	"lurur et pyralis"@en	lurur et pyralis	"nest"@en	nidos
<http://www.zoomathia.com/PLINE-10-annot/PL10/204/>	"little owl"@en	noctuae. [12041] et ceterae minores aves	"nest"@en	nidos
<http://www.zoomathia.com/PLINE-10-annot/PL10/204/>	"aeolus1"@en	aeolus avis minima cum asino. spinetis enim	"nest"@en	nidos
<http://www.zoomathia.com/PLINE-10-annot/PL10/204/>	"wasp"@en	ic-ch-neumones vespaes	"nest"@en	nidos
<http://www.zoomathia.com/PLINE-10-annot/PL10/204/>	"ass"@en	asino	"nest"@en	nidos
<http://www.zoomathia.com/PLINE-10-annot/PL10/204/>	"croy"@en	rursus cum tr<och>is<lo> mustela et cornix	"nest"@en	nidos
<http://www.zoomathia.com/PLINE-10-annot/PL10/204/>	"spider"@en	phalangia ac. aranei	"nest"@en	nidos
<http://www.zoomathia.com/PLINE-10-annot/PL10/204/>	"turdoides"@en	lurur et pyralis	"nest"@en	nidos
<http://www.zoomathia.com/PLINE-10-annot/PL10/204/>	"heron"@en	sorices et ardiolae invicem felibus insidiantes	"nest"@en	nidos
<http://www.zoomathia.com/PLINE-10-annot/PL10/204/>	"weasel"@en	rursus cum tr<och>is<lo> mustela et cornix	"nest"@en	nidos
<http://www.zoomathia.com/PLINE-10-annot/PL10/204/>	"BIRD"@en	avis	"nest"@en	nidos
<http://www.zoomathia.com/PLINE-10-annot/PL10/26/>	"BIRD"@en	nulla alia avis	"nest"@en	in alienis nidis

Quelles anecdotes mettant en relation un homme et un animal (pas toutes les relations hommes/animaux, comme la chasse, etc., mais seulement les situations individuelles, qui seront probablement marquées par un nom propre, ou un nom de lieu, etc.)

Reformulation: Les annotation mentionnant une anecdote, une relation homme/animal faisant parti du même paragraphe.

Note: Je me suis restreint à des relations spéciales (prédation, enmity, friendship)

```
PREFIX oa: <http://www.w3.org/ns/oa#>.
PREFIX skos: <http://www.w3.org/2004/02/skos/core#>.
PREFIX schema: <http://schema.org/>.
PREFIX paragraph: <http://www.zoomathia.com/>.
```

```
SELECT DISTINCT ?paragraph ?name_animal ?mention_animal ?name_relation ?
mention_relation WHERE {
    ?annotation1 a oa:Annotation;
        oa:hasBody ?animal;
        oa:hasTarget ?target1.
    ?target1 oa:hasSource ?paragraph;
        oa:hasSelector ?selector.
```

```

?selector oa:exact ?mention_animal.

?animal a skos:Concept;
    skos:prefLabel ?name_animal.

?animal_collection a skos:Collection;
    skos:prefLabel ?name_animal_collection;
    skos:member ?animal.

?annotation2 oa:hasBody ?relation;
    oa:hasTarget ?target2.
?target2 oa:hasSource ?paragraph;
    oa:hasSelector ?selector2.
?selector2 oa:exact ?mention_relation.

?relation skos:prefLabel ?name_relation;
    skos:broader+ ?relation_generique.
?relation_generique skos:prefLabel ?name_relation_generique.

FILTER (str(?name_animal_collection) = "Ancient class").
FILTER (str(?name_relation_generique) = "special relationship").
FILTER (lang(?name_animal) = "en").
FILTER (lang(?name_relation) = "en")
}

ORDER BY ?paragraph

```

Extrait résultat:

?paragraph	?name_animal	?mention_animal	?name_relation	?mention_relation
<http://www.zoomathia.com/PLINE-10-annotate/PL10/100>	"hen"@en	gallinaeos	"predation"@en	ut contra feram
<http://www.zoomathia.com/PLINE-10-annotate/PL10/100>	"WILD BEAST"@en	ut contra feram	"predation"@en	ut contra feram
<http://www.zoomathia.com/PLINE-10-annotate/PL10/100>	"owl"@en	colurnices	"predation"@en	ut contra feram
<http://www.zoomathia.com/PLINE-10-annotate/PL10/100>	"rooster"@en	gallinaeos	"predation"@en	ut contra feram
<http://www.zoomathia.com/PLINE-10-annotate/PL10/108>	"ACCELERATOR"@en	spectulatur occultus fronde latro et cauden...	"predation"@en	qua in ostentatione ut vi<n>-ctae praebentur...
<http://www.zoomathia.com/PLINE-10-annotate/PL10/108>	"ACCELERATOR"@en	qua in ostentatione ut vi<n>-ctae praebentur...	"predation"@en	qua in ostentatione ut vi<n>-ctae praebentur...
<http://www.zoomathia.com/PLINE-10-annotate/PL10/113>	"vulture"@en	vulture et fere graviores nisi ex procursu av...	"predation"@en	nec ullae verscutur ea quae rapuerit pedibus...
<http://www.zoomathia.com/PLINE-10-annotate/PL10/113>	"onion"@en	Tribus primis et quinto aqualium generi in...	"predation"@en	prospiciens ne omnium ferarum felus raper...
<http://www.zoomathia.com/PLINE-10-annotate/PL10/113>	"morphos"@en	Tribus primis et quinto aqualium generi in...	"predation"@en	prospiciens ne omnium ferarum felus raper...
<http://www.zoomathia.com/PLINE-10-annotate/PL10/113>	"black eagle"@en	Tribus primis et quinto aqualium generi in...	"predation"@en	prospiciens ne omnium ferarum felus raper...
<http://www.zoomathia.com/PLINE-10-annotate/PL10/113>	"WILD BEAST"@en	ne omnium ferarum felus raperentur	"predation"@en	prospiciens ne omnium ferarum felus raper...
<http://www.zoomathia.com/PLINE-10-annotate/PL10/113>	"pygargus2"@en	Tribus primis et quinto aqualium generi in...	"predation"@en	prospiciens ne omnium ferarum felus raper...
<http://www.zoomathia.com/PLINE-10-annotate/PL10/113>	"bearded vulture"@en	sed electos ab <is>is conatium genus ossi...	"predation"@en	prospiciens ne omnium ferarum felus raper...
<http://www.zoomathia.com/PLINE-10-annotate/PL10/113>	"BIRD"@en	avium	"predation"@en	harum satulicos motus, cum insidentur
<http://www.zoomathia.com/PLINE-10-annotate/PL10/113>	"AQUILA"@en	aqualium	"predation"@en	rapta non protinus ferunt, sed primo deponu...
<http://www.zoomathia.com/PLINE-10-annotate/PL10/113>	"owl"@en	culices	"predation"@en	in cibatu culices gratissimi
<http://www.zoomathia.com/PLINE-10-annotate/PL10/113>	"FLYING ANIMAL"@en	volucrum	"predation"@en	in cibatu culices gratissimi
<http://www.zoomathia.com/PLINE-10-annotate/PL10/113>	"FLYING ANIMAL"@en	Volucrum	"predation"@en	in cibatu culices gratissimi
<http://www.zoomathia.com/PLINE-10-annotate/PL10/113>	"black eagle"@en	Primo et secundo generi non minorum tant...	"predation"@en	nec unus hostis illi satis, est acrior cum dra...
<http://www.zoomathia.com/PLINE-10-annotate/PL10/113>	"black eagle"@en	Primo et secundo generi non minorum tant...	"predation"@en	Primo et secundo generi non minorum tantu...
<http://www.zoomathia.com/PLINE-10-annotate/PL10/113>	"pygargus2"@en	Primo et secundo generi non minorum tant...	"predation"@en	nec unus hostis illi satis, est acrior cum dra...
<http://www.zoomathia.com/PLINE-10-annotate/PL10/113>	"pygargus2"@en	Primo et secundo generi non minorum tant...	"predation"@en	Primo et secundo generi non minorum tantu...
<http://www.zoomathia.com/PLINE-10-annotate/PL10/113>	"QUADRUPED"@en	non minorum tantum quadrupedum rapina...	"predation"@en	nec unus hostis illi satis, est acrior cum dra...
<http://www.zoomathia.com/PLINE-10-annotate/PL10/113>	"QUADRUPED"@en	non minorum tantum quadrupedum rapina...	"predation"@en	Primo et secundo generi non minorum tantu...
<http://www.zoomathia.com/PLINE-10-annotate/PL10/113>	"QUADRUPED"@en	etiam cum cervis proelia, multum pulverem...	"predation"@en	nec unus hostis illi satis, est acrior cum dra...
<http://www.zoomathia.com/PLINE-10-annotate/PL10/113>	"deer"@en	etiam cum cervis proelia, multum pulverem...	"predation"@en	Primo et secundo generi non minorum tantu...
<http://www.zoomathia.com/PLINE-10-annotate/PL10/113>	"deer"@en	aqualie	"predation"@en	nec unus hostis illi satis, est acrior cum dra...
<http://www.zoomathia.com/PLINE-10-annotate/PL10/113>	"AQUILA"@en	aqualie	"predation"@en	Primo et secundo generi non minorum tantu...
<http://www.zoomathia.com/PLINE-10-annotate/PL10/113>	"AQUILA"@en	aqualie	"predation"@en	nec unus hostis illi satis, est acrior cum dra...
<http://www.zoomathia.com/PLINE-10-annotate/PL10/113>	"AQUILA"@en	aqualie	"predation"@en	Primo et secundo generi non minorum tantu...
<http://www.zoomathia.com/PLINE-10-annotate/PL10/113>	"AQUILA"@en	aqualie	"predation"@en	nec unus hostis illi satis, est acrior cum dra...
<http://www.zoomathia.com/PLINE-10-annotate/PL10/113>	"AQUILA"@en	aqualie	"predation"@en	Primo et secundo generi non minorum tantu...
<http://www.zoomathia.com/PLINE-10-annotate/PL10/113>	"FLYING ANIMAL"@en	aqualie	"predation"@en	nec unus hostis illi satis, est acrior cum dra...
<http://www.zoomathia.com/PLINE-10-annotate/PL10/113>	"FLYING ANIMAL"@en	avibus	"predation"@en	insidunt in eadem Africa pardi condensa<m...
<http://www.zoomathia.com/PLINE-10-annotate/PL10/113>	"leopard"@en	insidunt in eadem Africa pardi condensa<m...	"predation"@en	insidunt in eadem Africa pardi condensa<m...
<http://www.zoomathia.com/PLINE-10-annotate/PL10/113>	"scorpion"@en	Scorpiones terra vivunt,	"predation"@en	insidunt in eadem Africa pardi condensa<m...
<http://www.zoomathia.com/PLINE-10-annotate/PL10/113>	"raven"@en	simili modo corvus et milvus, illo praeripien...	"predation"@en	Sunt enim quaedam <is>is bella amicitiaeque...
<http://www.zoomathia.com/PLINE-10-annotate/PL10/113>	"raven"@en	simili modo corvus et milvus, illo praeripien...	"predation"@en	Sunt enim quaedam <is>is bella amicitiaeque...
<http://www.zoomathia.com/PLINE-10-annotate/PL10/113>	"little owl"@en	cornices atque noctua	"predation"@en	Sunt enim quaedam <is>is bella amicitiaeque...
<http://www.zoomathia.com/PLINE-10-annotate/PL10/113>	"little owl"@en	cornices atque noctua	"predation"@en	Sunt enim quaedam <is>is bella amicitiaeque...
<http://www.zoomathia.com/PLINE-10-annotate/PL10/113>	"AQUILA"@en	cornices atque noctua	"predation"@en	Sunt enim quaedam <is>is bella amicitiaeque...
<http://www.zoomathia.com/PLINE-10-annotate/PL10/113>	"crow"@en	cornices atque noctua	"predation"@en	Sunt enim quaedam <is>is bella amicitiaeque...
<http://www.zoomathia.com/PLINE-10-annotate/PL10/113>	"BIRD"@en	avium	"predation"@en	Sunt enim quaedam <is>is bella amicitiaeque...
<http://www.zoomathia.com/PLINE-10-annotate/PL10/113>	"BIRD"@en	avium	"predation"@en	Sunt enim quaedam <is>is bella amicitiaeque...

## Quels sont les oiseaux qui sont consommés (gastronomie)

Reformulation: Les annotations mentionnant un oiseau et une gastronomie faisant parti du même paragraphe

Note: L'insertion d'une collection Oiseau serait intéressante.

```

PREFIX oa:      <http://www.w3.org/ns/oa#>.
PREFIX skos:    <http://www.w3.org/2004/02/skos/core#>.
PREFIX schema:  <http://schema.org/> .

```

```

SELECT DISTINCT ?paragraph ?name_animal ?mention_animal ?name_conso ?
mention_conso WHERE {
    ?annotation1 a oa:Annotation;
        oa:hasBody ?animal;

```

```

FILTER (str(?name_animal_generique) in ("BIRD","BIRD WITH CLAW","BIRD WITH
DES","WATERBIRD","NIGHT BIRD","MIGRATORY BIRD", "PALMIPED BIRD")).
FILTER (str(?name_conso_generique) = "animal in human nourishing").
FILTER (lang(?name_animal) = "en").
FILTER (lang(?name_conso) = "en")

ORDER BY ?paragraph

```

[illegible]

Reformulation: Les annotations qui mentionnent un remède , une langue et un animal faisant parti du même paragraphe

Tentative d'utilisation "medical use of animal", "medical use of animal parts". Résultat basé sur le

concept générique "medical use of animal" et inclue tous les descendant.

Il est possible de trouver les mentions de langue et l'animal en question cependant.

```
PREFIX oa: <http://www.w3.org/ns/oa#>.
PREFIX skos: <http://www.w3.org/2004/02/skos/core#>.
PREFIX schema: <http://schema.org/>.

SELECT DISTINCT ?paragraph ?name_animal ?mention1 ?mention2 WHERE {
  ?annotation1 a oa:Annotation;
    oa:hasBody ?animal;
    oa:hasTarget ?target1.
  ?target1 oa:hasSource ?paragraph;
    oa:hasSelector ?selector1.

  ?annotation2 a oa:Annotation;
    oa:hasBody ?use;
    oa:hasTarget ?target2.
  ?target2 oa:hasSource ?paragraph;
    oa:hasSelector ?selector2.

  ?selector1 oa:exact ?mention1.
  ?selector2 oa:exact ?mention2.

  ?animal a skos:Concept;
    skos:prefLabel ?name_animal.

  ?animal_collection a skos:Collection;
    skos:prefLabel ?name_animal_collection;
    skos:member ?animal.

  ?use skos:prefLabel ?name_use;
    skos:broader+ ?use_generique.
  ?use_generique skos:prefLabel ?name_use_generique.

  FILTER (str(?name_animal_collection) = "Ancient class").
  FILTER (str(?name_use_generique) = "medical use of animal").
  FILTER (lang(?name_animal) = "en").
  FILTER (lang(?name_use) = "en")
}

ORDER BY ?paragraph
```

Extrait résultat:

?paragraph	?name_animal	?mention1	?mention2
<http://www.zoomathia.com/PLINE-10-anno...>	"AQUILA"@en	aquilarum	ad multa remedia utilis. nihili igne deperdens. ... est autem lapis iste praecon...
<http://www.zoomathia.com/PLINE-10-anno...>	"rooster"@en	Proxime dioriam sentiunt et hi nostri vicia nocturni. quos excitandis in op...	Aliud reperit Syriae pars quae Commaedene vocatur. adidem eorum in yas...
<http://www.zoomathia.com/PLINE-11-anno...>	"white worm born from snow"@en	in Media diorem candidi. grandiores torquentesque	alae medentur
<http://www.zoomathia.com/PLINE-11-anno...>	"gnat"@en	rursus alia genera culicum accensens natura quiait.	alae medentur
<http://www.zoomathia.com/PLINE-11-anno...>	"fig oar"@en	ficarios culces. sacrificus densat.	alae medentur
<http://www.zoomathia.com/PLINE-11-anno...>	"caterpillar with robe"@en	est earum genus tunicas suas trahentium quo cocleae modo. sed harum p...	alae medentur
<http://www.zoomathia.com/PLINE-11-anno...>	"vermises"@en	cantharidas vermiculi ficorum et oii etia: peices et cymacanthas et rosae.	alae medentur
<http://www.zoomathia.com/PLINE-11-anno...>	"VERMIS"@en	vermiculi rutili. nam et losa nix vetustate rufescit. hirti pills. in Media quide...	alae medentur
<http://www.zoomathia.com/PLINE-11-anno...>	"red worm born from snow"@en	in nive inveniuntur vetustiore vermiculi rutili. nam et losa nix vetustate rufes...	alae medentur
<http://www.zoomathia.com/PLINE-11-anno...>	"snail"@en	tunicas suas trahentium quo cocleae modo	alae medentur
<http://www.zoomathia.com/PLINE-11-anno...>	"ENTOMON"@en	omnia insecta	remedia dicemus suis locis. nunc enim sermo de natura est.
<http://www.zoomathia.com/PLINE-8-anno...>	"otter"@en	cetera species lutrae. Vitrumque aquaticum. utrique mollior pluma pilus	castoreum id vocant medici
<http://www.zoomathia.com/PLINE-8-anno...>	"FISH"@en	Cauda piscium his	castoreum id vocant medici
<http://www.zoomathia.com/PLINE-8-anno...>	"AQUATIC"@en	Vitrumque aquaticum	castoreum id vocant medici
<http://www.zoomathia.com/PLINE-8-anno...>	"wild ass"@en	in Africa. quae et asinorum silvestrium multitudinem fundit. mares in eo oe...	comitiali morbo remedia
<http://www.zoomathia.com/PLINE-8-anno...>	"gecko"@en	et stelliones senectutem exuere itaque prolinus devorare praeripientes co...	fel suum ad multa medicamenta utile. item coaquulum ad comitiales morbos
<http://www.zoomathia.com/PLINE-8-anno...>	"frog"@en	Ranae quoque rubetae. quarum et in terra et in umore vita. plurimis referta.	comitiali morbo remedia
<http://www.zoomathia.com/PLINE-8-anno...>	"seal"@en	Similis et vitulo marino victus in mari ac terra. simile floris et inoenium. Eyo...	comitiali morbo remedia
<http://www.zoomathia.com/PLINE-8-anno...>	"flea"@en	Ranae quoque rubetae. quarum et in terra et in umore vita. plurimis referta.	fel suum ad multa medicamenta utile. item coaquulum ad comitiales morbos
<http://www.zoomathia.com/PLINE-8-anno...>	"frog"@en	Ranae quoque rubetae. quarum et in terra et in umore vita. plurimis referta.	comitiali morbo remedia
<http://www.zoomathia.com/PLINE-8-anno...>	"beaver"@en	simile floris et inoenium	fel suum ad multa medicamenta utile. item coaquulum ad comitiales morbos
<http://www.zoomathia.com/PLINE-8-anno...>	"snake"@en	serpentes luantur	Accens autem utrius libeat odore et serpentes luantur et comitiales morb...
<http://www.zoomathia.com/PLINE-8-anno...>	"snake"@en	morsus	contra morsus vero praecipuum remedium ex coaquulo hinnulei matris in ut...
<http://www.zoomathia.com/PLINE-8-anno...>	"snake"@en	At his cum serpente puona: vestioant cavernas narium quae spiritu extrahu...	contra morsus vero praecipuum remedium ex coaquulo hinnulei matris in ut...
<http://www.zoomathia.com/PLINE-8-anno...>	"snake"@en	cavernas	contra morsus vero praecipuum remedium ex coaquulo hinnulei matris in ut...
<http://www.zoomathia.com/PLINE-8-anno...>	"snake"@en	abobendis serpentibus	illi sunt adices medicaminibus apti contra quae defluviu capilli tenaces.
<http://www.zoomathia.com/PLINE-8-anno...>	"BIRD"@en	quam ad ova volucres	Quapropter obviam itur per XXXX eos dies. gallinae maxime fimo inmixto ...
<http://www.zoomathia.com/PLINE-8-anno...>	"hen"@en	Quapropter obviam itur per XXXX eos dies. gallinae maxime fimo inmixto ...	



## Quels sont les animaux qui communiquent entre eux (textes où il est question de mode de communication, de langage, etc.)?

Remarque: Pas de concept **spécifique** qui représente ce comportement dans "comportement social". Le Concept le plus proche de communication est "Parole". Possibilité de chercher comportement social général et parole au sein d'un même paragraphe (Pas de résultat).

Solution: On se concentre uniquement sur le concept de parole. Ce qui inclue les mimiques, la compréhension de la parole humaine, etc...

```
PREFIX oa:      <http://www.w3.org/ns/oa#>.
PREFIX skos:    <http://www.w3.org/2004/02/skos/core#>.
PREFIX schema:  <http://schema.org/> .

SELECT DISTINCT ?paragraph ?name_animal ?mention_animal ?name_social ?
mention_social WHERE {
    ?annotation1 a oa:Annotation;
                  oa:hasBody ?animal;
                  oa:hasTarget ?target1.
    ?target1 oa:hasSource ?paragraph;
             oa:hasSelector ?selector.

    ?selector oa:exact ?mention_animal.

    ?animal a skos:Concept;
             skos:prefLabel ?name_animal.

    ?animal_collection a skos:Collection;
                       skos:prefLabel ?name_animal_collection;
                       skos:member ?animal.

    ?annotation2 oa:hasBody ?social;
                  oa:hasTarget ?target2.
    ?target2 oa:hasSource ?paragraph;
             oa:hasSelector ?selector2.
    ?selector2 oa:exact ?mention_social.

    ?social skos:prefLabel ?name_social.

    FILTER (str(?name_animal_collection) = "Ancient class").
    FILTER (str(?name_social) = "speech").
    FILTER (lang(?name_animal) = "en").
    FILTER (lang(?name_social) = "en")
}
ORDER BY ?paragraph
```

Extrait résultat:

?paragraph	?name_animal	?mention_animal	?mention_social
<http://www.zoomathia.com/PL/NE-10-annotate/PL/10/117>	"BIRD"@en	avem	quidem etiam sermocinantes
<http://www.zoomathia.com/PL/NE-10-annotate/PL/10/117>	"parrot"@en	super omnia humanas voces reddunt, psittaci quidem etiam sermocinante...	quidem etiam sermocinantes
<http://www.zoomathia.com/PL/NE-10-annotate/PL/10/120>	"sterning"@en	sturnum, item lusciniæ Graeco ac Latino sermone dociles, praeterea medi...	Graeco ac Latino sermone dociles, praeterea mediantes assidue et in die...
<http://www.zoomathia.com/PL/NE-10-annotate/PL/10/120>	"nightingale"@en	sturnum, item lusciniæ Graeco ac Latino sermone dociles, praeterea medi...	Graeco ac Latino sermone dociles, praeterea mediantes assidue et in die...
<http://www.zoomathia.com/PL/NE-10-annotate/PL/10/124>	"raven"@en	Reddatur et corvis sua gratia, indinatione quoque populi Romani testata...	dein plura contexta verba exorimens et alia atque alia crebro addiscens
<http://www.zoomathia.com/PL/NE-10-annotate/PL/10/124>	"vulture"@en	feri	dein plura contexta verba exorimens et alia atque alia crebro addiscens
<http://www.zoomathia.com/PL/NE-10-annotate/PL/10/124>	"crow"@en	nunc quoque erat in urbe Roma, haec prodente me, equitis Romani cornix...	dein plura contexta verba exorimens et alia atque alia crebro addiscens
<http://www.zoomathia.com/PL/NE-10-annotate/PL/10/137>	"BIRD"@en	avium sermonis	alium colloquia
<http://www.zoomathia.com/PL/NE-10-annotate/PL/10/137>	"BIRD"@en	avium sermonis	avium sermonis
<http://www.zoomathia.com/PL/NE-10-annotate/PL/10/137>	"dragon1"@en	Melampodi profecto aures lambendo dedisse intellectum avium sermonis d...	alium colloquia
<http://www.zoomathia.com/PL/NE-10-annotate/PL/10/137>	"snake born from bird blood"@en	aves quarum confuso sanguine serpens dignatur, quem quisquis ederit int...	alium colloquia
<http://www.zoomathia.com/PL/NE-10-annotate/PL/10/137>	"snake born from bird blood"@en	aves quarum confuso sanguine serpens dignatur, quem quisquis ederit int...	alium colloquia
<http://www.zoomathia.com/PL/NE-10-annotate/PL/10/137>	"BIRD"@en	aves quarum confuso sanguine	alium colloquia
<http://www.zoomathia.com/PL/NE-10-annotate/PL/10/137>	"BIRD"@en	aves quarum confuso sanguine	avium sermonis
<http://www.zoomathia.com/PL/NE-10-annotate/PL/10/137>	"BIRD"@en	ave	alium colloquia
<http://www.zoomathia.com/PL/NE-10-annotate/PL/10/137>	"BIRD"@en	ave	avium sermonis
<http://www.zoomathia.com/PL/NE-10-annotate/PL/10/137>	"horse"@en	equino capite	alium colloquia
<http://www.zoomathia.com/PL/NE-10-annotate/PL/10/137>	"horse"@en	equino capite	avium sermonis
<http://www.zoomathia.com/PL/NE-10-annotate/PL/10/137>	"AL ES"@en	alium colloquia	alium colloquia
<http://www.zoomathia.com/PL/NE-10-annotate/PL/10/137>	"AL ES"@en	alium colloquia	avium sermonis

## Sur le rythme alimentaire des animaux : quels sont les animaux capables de jeûner, quelles sont les informations sur les rythmes de repas (fréquence)?

Reformulation: une annotation mentionnant un animal et une annotation mentionnant le jeune dans le même paragraphe.

Note: Jeûne en anglais se dit "Fast" ou "Fasting". Peut être renommer le concept en Fasting pour éviter toutes confusion. (se trouve dans vie quotidienne)

```
PREFIX oa: <http://www.w3.org/ns/oa#>.
PREFIX skos: <http://www.w3.org/2004/02/skos/core#>.
PREFIX schema: <http://schema.org/>.

SELECT DISTINCT ?paragraph ?mention_fasting WHERE {
  ?annotation2 oa:hasBody ?fasting;
    oa:hasTarget ?target2.
  ?target2 oa:hasSource ?paragraph;
    oa:hasSelector ?selector2.
  ?selector2 oa:exact ?mention_fasting.

  ?fasting skos:prefLabel ?name_fasting.

  FILTER (str(?name_fasting) = "fast").
  FILTER (lang(?name_fasting) = "en")
}

ORDER BY ?paragraph
```

Aucune mention de jeûne relevée dans les chapitres de Pline. Dans le fichier d'erreur, il y a la mention "special diet" qui pourrait faire référence au jeûne.

## Quelles sont les données transmises sur le temps de gestation des animaux?

Remarque: Il n'existe pas de concept représentant la "**valeur**" du temps de gestion. Voir ce qu'on peut faire (une collection de valeur ?)

```
PREFIX oa: <http://www.w3.org/ns/oa#>.
PREFIX skos: <http://www.w3.org/2004/02/skos/core#>.
PREFIX schema: <http://schema.org/>.

SELECT DISTINCT ?paragraph ?mention_pregnancy WHERE {
  ?annotation2 oa:hasBody ?pregnancy;
    oa:hasTarget ?target2.
  ?target2 oa:hasSource ?paragraph;
    oa:hasSelector ?selector2.
```



```

?selector2 oa:exact ?mention_pregnancy.

?pregnancy skos:prefLabel ?name_pregnancy.

FILTER (str(?name_pregnancy) = "length of pregnancy").
FILTER (lang(?name_pregnancy) = "en")
}

ORDER BY ?paragraph

#####

#####

PREFIX oa:      <http://www.w3.org/ns/oa#>.
PREFIX skos:    <http://www.w3.org/2004/02/skos/core#>.
PREFIX schema: <http://schema.org/> .

SELECT DISTINCT ?paragraph ?name_animal ?mention_animal ?mention_pregnancy WHERE
{
  ?annotation1 a oa:Annotation;
               oa:hasBody ?animal;
               oa:hasTarget ?target1.
  ?target1 oa:hasSource ?paragraph;
           oa:hasSelector ?selector.

  ?selector oa:exact ?mention_animal.

  ?animal a skos:Concept;
          skos:prefLabel ?name_animal.

  ?animal_collection a skos:Collection;
                    skos:prefLabel ?name_animal_collection;
                    skos:member ?animal.

  ?annotation2 oa:hasBody ?pregnancy;
               oa:hasTarget ?target2.
  ?target2 oa:hasSource ?paragraph;
           oa:hasSelector ?selector2.
  ?selector2 oa:exact ?mention_pregnancy.

  ?pregnancy skos:prefLabel ?name_pregnancy.

  FILTER (str(?name_pregnancy) = "length of pregnancy").
  FILTER (lang(?name_pregnancy) = "en")
  FILTER (str(?name_animal_collection) = "Ancient class").
  FILTER (lang(?name_animal) = "en").
}

ORDER BY ?paragraph

```

Extrait resultat:

?paragraph	?mention_pregnancy
<http://www.zoomathia.com/PLINE-10-annotate/PL/10/147>	a coitu X diebus ova maturescunt in utero. vexatis autem oallinae et columbae pinna evulsa allave simili iniuria diutius
<http://www.zoomathia.com/PLINE-10-annotate/PL/10/159>	pariunt a coitu V
<http://www.zoomathia.com/PLINE-10-annotate/PL/10/161>	partus excluditur diebus ter novenis aut tardius tricensimo
<http://www.zoomathia.com/PLINE-10-annotate/PL/10/170>	terti-<o> die intra uterum catulos excludit
<http://www.zoomathia.com/PLINE-10-annotate/PL/10/175>	ocissime pariunt quae plurimos oiaunt.
<http://www.zoomathia.com/PLINE-10-annotate/PL/10/175>	quo malus est animal. tanto diutius formatur in utero. diutius qeantur quibus longiora sunt vitae spatia. neque crescentium tempestiva ad generandum aetas.
<http://www.zoomathia.com/PLINE-10-annotate/PL/10/177>	ferunt LX diebus.
<http://www.zoomathia.com/PLINE-10-annotate/PL/10/177>	XII mensibus ferunt.
<http://www.zoomathia.com/PLINE-10-annotate/PL/10/187>	Cum diversi generis coiere animalia. ita demum generant. si tempus nascendi par habent.
<http://www.zoomathia.com/PLINE-8-annotate/PL/8/112>	Octonis mensibus ferunt partus
<http://www.zoomathia.com/PLINE-8-annotate/PL/8/126>	XXX die
<http://www.zoomathia.com/PLINE-8-annotate/PL/8/161>	Gerunt uterum sexagenis diebus
<http://www.zoomathia.com/PLINE-8-annotate/PL/8/163>	Partum in eo genere undenis mensibus ferunt. duodecimo oiaunt.
<http://www.zoomathia.com/PLINE-8-annotate/PL/8/171>	mula oiaunt mense XII
<http://www.zoomathia.com/PLINE-8-annotate/PL/8/177>	pariunt mense X. quicquid ante genitum. inutile est. Sunt auctores ioso complente decimum mensem die parere.
<http://www.zoomathia.com/PLINE-8-annotate/PL/8/187>	gerunt partum diebus CL. postea concepti invalidi.
<http://www.zoomathia.com/PLINE-8-annotate/PL/8/209>	ferunt V mensibus. ut oves
<http://www.zoomathia.com/PLINE-8-annotate/PL/8/209>	temus utero quatuor mensem
<http://www.zoomathia.com/PLINE-8-annotate/PL/8/28>	biennio
<http://www.zoomathia.com/PLINE-9-annotate/PL/9/29>	Decem annis gestare in utero vulvus existimat. Aristoteles biennio nec amplius quam (semel oiaere plures que quam) singulos
<http://www.zoomathia.com/PLINE-9-annotate/PL/9/163>	excludunt L die
<http://www.zoomathia.com/PLINE-9-annotate/PL/9/21>	pariunt catulos decimo mense aestivo tempore

?paragraph	?name_animal	?mention_animal	?mention_pregnancy
<http://www.zoomathia.com/P...>10-annotationPL/10/147>	"blackbird"@en	merulae	a colu X diebus ova maturescunt in utero. vexatis autem gallinae et colum...
<http://www.zoomathia.com/P...>10-annotationPL/10/147>	"turtledove"@en	turtures	a colu X diebus ova maturescunt in utero. vexatis autem gallinae et colum...
<http://www.zoomathia.com/P...>10-annotationPL/10/147>	"thrush"@en	turdi, in cacuminihus arborum luto nidificantes paene contextim. in secess...	a colu X diebus ova maturescunt in utero. vexatis autem gallinae et colum...
<http://www.zoomathia.com/P...>10-annotationPL/10/147>	"mudow"@en	calumpi	a colu X diebus ova maturescunt in utero. vexatis autem gallinae et colum...
<http://www.zoomathia.com/P...>10-annotationPL/10/147>	"swallow1"@en	hirundines	a colu X diebus ova maturescunt in utero. vexatis autem gallinae et colum...
<http://www.zoomathia.com/P...>10-annotationPL/10/147>	"hen"@en	Quaedam omni tempore coeunt, ut gallinae, et pariunt, praeterquam duobu...	a colu X diebus ova maturescunt in utero. vexatis autem gallinae et colum...
<http://www.zoomathia.com/P...>10-annotationPL/10/147>	"hen"@en	vexatis autem gallinae et columbae pinna evulsa allave simili iniuria diutius	a colu X diebus ova maturescunt in utero. vexatis autem gallinae et colum...
<http://www.zoomathia.com/P...>10-annotationPL/10/161>	"hen"@en	si gallinis subiciantur incubanda	parius excluditur debus ter novenis aut tardius tricensimo
<http://www.zoomathia.com/P...>10-annotationPL/10/170>	"goe"@en	vispere nas caput inserit in os, quod illa abrodit voluptatis dulcedine. ff170	terti-> die intra uterum catulos excludit
<http://www.zoomathia.com/P...>10-annotationPL/10/170>	"bat"@en	Volucrum animal parit vespertilio tantum, cui et membranaceae pinnae uni...	terti-> die intra uterum catulos excludit
<http://www.zoomathia.com/P...>10-annotationPL/10/170>	"snake"@en	Rursus in terrestribus ova pariunt serpentes, de quibus nondum dictum <e...	terti-> die intra uterum catulos excludit
<http://www.zoomathia.com/P...>10-annotationPL/10/170>	"fish"@en	unius coloris et mollia, ut pisces	terti-> die intra uterum catulos excludit
<http://www.zoomathia.com/P...>10-annotationPL/10/170>	"TERRESTRIAL"@en	terrestrium	terti-> die intra uterum catulos excludit
<http://www.zoomathia.com/P...>10-annotationPL/10/175>	"elephant"@en	sinulos qionunt elephant, cameli, equi, acanthis duodenos	ocissime pariunt quae plurimos qionunt
<http://www.zoomathia.com/P...>10-annotationPL/10/175>	"elephant"@en	sinulos qionunt elephant, cameli, equi, acanthis duodenos	quo malus est animal, tanto diutius formatur in utero. diutius oestantur quib...
<http://www.zoomathia.com/P...>10-annotationPL/10/175>	"goldfinch"@en	acanthis duodenos, avis minima	ocissime pariunt quae plurimos qionunt
<http://www.zoomathia.com/P...>10-annotationPL/10/175>	"goldfinch"@en	acanthis duodenos, avis minima	quo malus est animal, tanto diutius formatur in utero. diutius oestantur quib...
<http://www.zoomathia.com/P...>10-annotationPL/10/175>	"horse"@en	sinulos qionunt elephant, cameli, equi, acanthis duodenos	ocissime pariunt quae plurimos qionunt
<http://www.zoomathia.com/P...>10-annotationPL/10/175>	"horse"@en	sinulos qionunt elephant, cameli, equi, acanthis duodenos	quo malus est animal, tanto diutius formatur in utero. diutius oestantur quib...
<http://www.zoomathia.com/P...>10-annotationPL/10/175>	"BIRD"@en	acanthis duodenos, avis minima	ocissime pariunt quae plurimos qionunt
<http://www.zoomathia.com/P...>10-annotationPL/10/175>	"BIRD"@en	acanthis duodenos, avis minima	quo malus est animal, tanto diutius formatur in utero. diutius oestantur quib...
<http://www.zoomathia.com/P...>10-annotationPL/10/175>	"goldfinch"@en	sinulos qionunt elephant, cameli, equi, acanthis duodenos	ocissime pariunt quae plurimos qionunt
<http://www.zoomathia.com/P...>10-annotationPL/10/175>	"goldfinch"@en	sinulos qionunt elephant, cameli, equi, acanthis duodenos	quo malus est animal, tanto diutius formatur in utero. diutius oestantur quib...
<http://www.zoomathia.com/P...>10-annotationPL/10/175>	"camel"@en	sinulos qionunt elephant, cameli, equi, acanthis duodenos	ocissime pariunt quae plurimos qionunt
<http://www.zoomathia.com/P...>10-annotationPL/10/175>	"camel"@en	sinulos qionunt elephant, cameli, equi, acanthis duodenos	quo malus est animal, tanto diutius formatur in utero. diutius oestantur quib...
<http://www.zoomathia.com/P...>10-annotationPL/10/175>	"goldfinch"@en	sinulos qionunt elephant, cameli, equi, acanthis duodenos	ocissime pariunt quae plurimos qionunt
<http://www.zoomathia.com/P...>10-annotationPL/10/175>	"cat"@en	sinulos qionunt elephant, cameli, equi, acanthis duodenos	ocissime pariunt quae plurimos qionunt
<http://www.zoomathia.com/P...>10-annotationPL/10/175>	"cat"@en	Fellum et ichneumonum reliqua ut canum, vivunt annis senis.	XII mensibus ferunt
<http://www.zoomathia.com/P...>10-annotationPL/10/175>	"monopose"@en	reliqua ut canum	XII mensibus ferunt
<http://www.zoomathia.com/P...>10-annotationPL/10/175>	"camel"@en	cameli XII mensibus ferunt. a trimatu pariunt vere iterumque post annum in...	XII mensibus ferunt
<http://www.zoomathia.com/P...>10-annotationPL/10/175>	"goe"@en	reliqua ut canum	XII mensibus ferunt
<http://www.zoomathia.com/P...>10-annotationPL/10/175>	"hare"@en	dasydodes omni mense pariunt et superfetant, sicut lepores, a partu statim...	XII mensibus ferunt
<http://www.zoomathia.com/P...>10-annotationPL/10/175>	"elephant"@en	elephanti, ut diximus, pariunt sinulos maontudine vituli trimenstris.	XII mensibus ferunt
<http://www.zoomathia.com/P...>10-annotationPL/10/187>	"hizard"@en	Quadiroedum ova qionentium laceratis ore parere. ut creditur vulgo, Aristot...	Cum diversi generis coiere animalia ita demum oenerant, si tempous nasce...

## Quelles sont les expérimentations faites sur les animaux (contexte, description...)?

Remarque: Pas de concept expérimentations. On peut éventuellement se trouver dans le cadre d'une "utilisation de l'animal", cependant il n'y a pas de concept exprimant l'utilisation pour la science ou autre. Peut être que ça rentre dans "l'utilisation médicale" ou "technique" ?

PREFIX oa: <http://www.w3.org/ns/oa#>.

PREFIX skos: <http://www.w3.org/2004/02/skos/core#>.

PREFIX schema: <http://schema.org/> .

```
SELECT DISTINCT ?paragraph ?name_animal ?mention_animal ?mention_use WHERE {
  ?annotation1 a oa:Annotation;
```

```
    oa:hasBody ?animal;
```

```
    oa:hasTarget ?target1.
```

```
  ?target1 oa:hasSource ?paragraph;
```

```
    oa:hasSelector ?selector.
```

```
  ?selector oa:exact ?mention_animal.
```

```
  ?animal a skos:Concept;
    skos:prefLabel ?name_animal.
```

```
  ?animal_collection a skos:Collection;
    skos:prefLabel ?name_animal_collection;
    skos:member ?animal.
```

```
  ?annotation2 oa:hasBody ?use;
    oa:hasTarget ?target2.
  ?target2 oa:hasSource ?paragraph;
    oa:hasSelector ?selector2.
  ?selector2 oa:exact ?mention_use.
```

```
  ?use skos:prefLabel ?name_use.
```

```
  FILTER (str(?name_use) = "technical use").
  FILTER (lang(?name_use) = "en")
  FILTER (str(?name_animal_collection) = "Ancient class").
  FILTER (lang(?name_animal) = "en").
```

```
}
ORDER BY ?paragraph
```

Extrait resultat

?paragraph	?name_animal	?mention_animal	?mention_use
<http://www.zoomathia.com/PLINE-10-annotate/PL/10/2>	"BIRD"@en	avium	praemia ex <i>is ova, propter amplitudinem pro quibusdam habita vasis
<http://www.zoomathia.com/PLINE-10-annotate/PL/10/2>	"BIRD"@en	avium	conosque bellicos et galeas adornantes pinnae
<http://www.zoomathia.com/PLINE-8-annotate/PL/8/124>	"bear"@en	villus magnitudine ursorum, sed, cum libuit sui coloris esse, asini similis	ut thoraces ex eo faciant
<http://www.zoomathia.com/PLINE-8-annotate/PL/8/124>	"ass"@en	villus magnitudine ursorum, sed, cum libuit sui coloris esse, asini similis	ut thoraces ex eo faciant
<http://www.zoomathia.com/PLINE-8-annotate/PL/8/124>	"deer"@en	caput maius cervino nec absimile	ut thoraces ex eo faciant
<http://www.zoomathia.com/PLINE-8-annotate/PL/8/226>	"hare"@en	in lithaca lepores inlati moriuntur extremis quidem in litoribus	Quarum e pelibus cubicularia vidimus stracula
<http://www.zoomathia.com/PLINE-8-annotate/PL/8/226>	"weasel"@en	In Poroselene insula viam mustelae non transeunt.	Quarum e pelibus cubicularia vidimus stracula
<http://www.zoomathia.com/PLINE-8-annotate/PL/8/226>	"mole"@en	Item Boeotae Lebadetae inlatae solum ipsam fuoiant, quae iuxta in Orchomeno tot...	Quarum e pelibus cubicularia vidimus stracula
<http://www.zoomathia.com/PLINE-9-annotate/PL/9/148>	"trapos"@en	spissum ac: gregedum et asperum trapos idl vocatur.	ex quo penicilli
<http://www.zoomathia.com/PLINE-9-annotate/PL/9/148>	"manos"@en	saissum et mollius manos	ex quo penicilli
<http://www.zoomathia.com/PLINE-9-annotate/PL/9/148>	"achillium"@en	tenue densumque, ex quo penicilli, Achillium	ex quo penicilli
<http://www.zoomathia.com/PLINE-9-annotate/PL/9/148>	"FISH"@en	isces	ex quo penicilli

**Quels sont les animaux typiques de l'Afrique (qui ne sont pas considérés comme des variantes d'animaux connus en Europe, telles les moutons (ici d'Afrique), les lions (ici d'Afrique, mais il y en a aussi en Europe et en Asie)**

**Quels sont les caractéristiques comportementaux des rongeurs, ou des souris ?**

**quelles sont les paires d'animaux (régulièrement associés) qui sont dans un rapport spécial d'affection (sympathie) ou de haine (antipathie)?**

**Quels sont les objets techniques réalisés avec des parties animales (peau, os, cornes...)?**

```
PREFIX oa:      <http://www.w3.org/ns/oa#>.
PREFIX skos: <http://www.w3.org/2004/02/skos/core#>.
PREFIX schema: <http://schema.org/> .

SELECT DISTINCT ?paragraph ?name_animal ?mention_animal ?mention_use WHERE {
  ?annotation1 a oa:Annotation;
               oa:hasBody ?animal;
               oa:hasTarget ?target1.
  ?target1 oa:hasSource ?paragraph;
           oa:hasSelector ?selector.

  ?selector oa:exact ?mention_animal.

  ?animal a skos:Concept;
          skos:prefLabel ?name_animal.

  ?animal_collection a skos:Collection;
                    skos:prefLabel ?name_animal_collection;
```

```

        skos:member ?animal.

?annotation2 oa:hasBody ?use;
              oa:hasTarget ?target2.
?target2 oa:hasSource ?paragraph;
          oa:hasSelector ?selector2.
?selector2 oa:exact ?mention_use.

?use skos:prefLabel ?name_use.

FILTER (str(?name_use) = "technical use").
FILTER (lang(?name_use) = "en")
FILTER (str(?name_animal_collection) = "Ancient class").
FILTER (lang(?name_animal) = "en").
}
ORDER BY ?paragraph

```

## Extraire le sous-graphe de connaissance d'un paragraphe

Exemple pour le paragraphe 195 du chapitre 8 de Pline.

```

PREFIX oa:      <http://www.w3.org/ns/oa#>.
PREFIX skos:    <http://www.w3.org/2004/02/skos/core#>.
PREFIX schema:  <http://schema.org/> .
PREFIX graphs:  <http://exemple.fr/>.
PREFIX para:    <http://www.zoomathia.com/PLINE-8-annotateIPL/8/>.

construct { para:195 graphs:hasConcept ?label_concept.} where {
    ?annotation a oa:Annotation;
                oa:hasBody ?concept;
                oa:hasTarget ?target.
    ?target oa:hasSource para:195.
    ?concept skos:prefLabel ?label_concept.
}

```

