

# Cultural and historical linguistic unity in the multilingual Alpine region

illustrated with examples of vocabulary from the realm of  
"natural environment"

Markus Kunzmann | Christina Mutter

<http://www.verba-alpina.gwi.uni-muenchen.de>

**LandLex Colloquium** <<(Historical) Lexicography of the Landscape And the Digital Age>>  
**23rd May 2019, Akademie der Wissenschaften, Göttingen**





## Outline

### 1. Project description

- research aims
- area under investigation
- conceptual domains
- data and methodology

### 2. Representation of the realm of „landscape“ in lexicographic resources

### 3. Some examples of our data

### 4. Linking of datasets

## 1. Project description

- *VerbaAlpina. Der alpine Kulturraum im Spiegel seiner Mehrsprachigkeit* (VerbaAlpina. The Alpine cultural region reflected through its multilingualism)
- Funded by the German Research Foundation (DFG)
- 1<sup>st</sup> term: 10/2014-10/2017, 2<sup>nd</sup> term: 11/2017-11/2020 (perspective until 2025)
- Investigation of the multilingual Alpine region
- Combination of (geo-)linguistics and digital humanities



## Research Aims

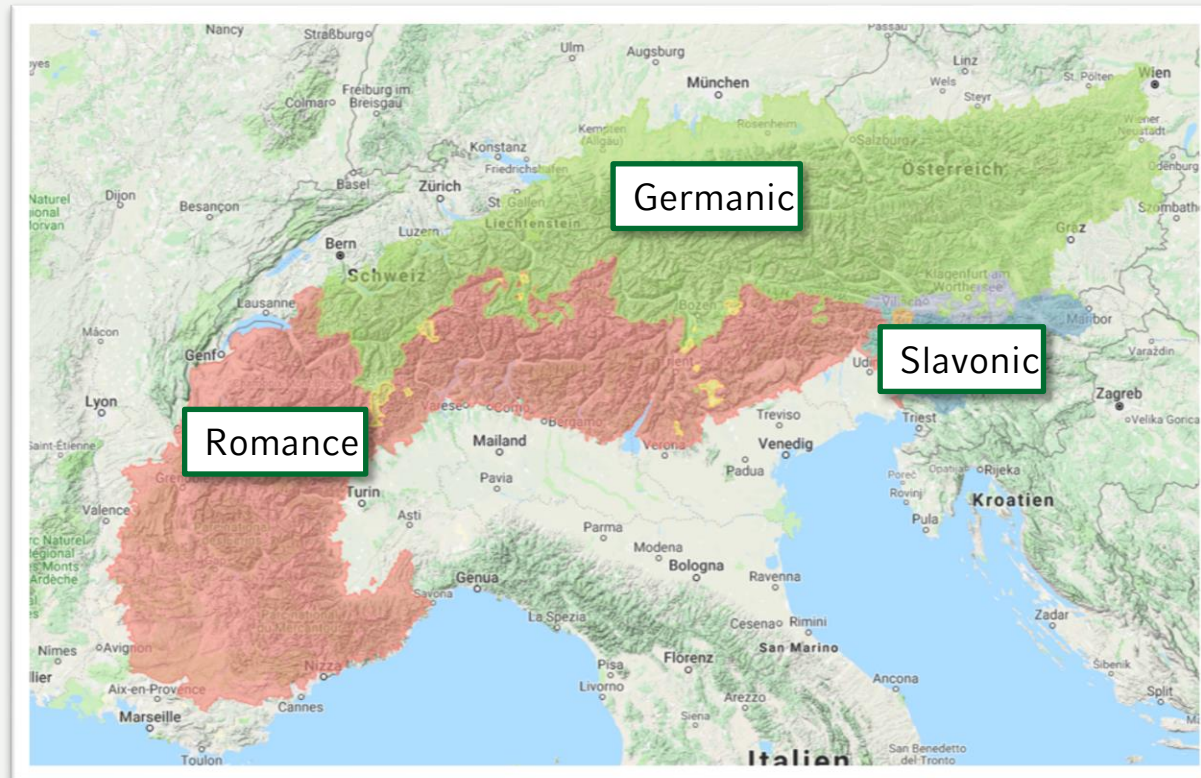
- Selective and analytical investigation of the linguistically and dialectally highly fragmented alpine space in its historico-cultural and historical-linguistic unity
- Overcoming of the traditional limitation of geolinguistic investigation to nation-states
- recognition of connections regarding the etymology of the individual dialectal words
- Setting up a portal by using modern media technology: documentation, data collection, collaborative development
- cooperation with other projects is fundamental for VerbaAlpina



## Area under investigation: The Alpine region

- Area of investigation is limited to the territorial borders defined by the Alpine convention
- surface area of 190,600 km<sup>2</sup>, encompasses parts of six different countries (D, A, CH, I, F, SLO) and two entire countries (FL, MC)

- ethnographic and topographic homogeneity and strong linguistic heterogeneity → 3 language families (Germanic, Romance and Slavonic)





## Three conceptual domains

project years	1	2	3	4	5	6	7	8	9	
calendar year	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
quarter	i, ii, iii, iv	i, ii, iii, iv	i, ii, iii, iv	i, ii, iii, iv	i, ii, iii, iv	i, ii, iii, iv	i, ii, iii, iv	i, ii, iii, iv	i, ii, iii, iv	i, ii, iii, iv
project phase	I			II			III			
focus	<b>culture</b> <ul style="list-style-type: none"> <li>• alpine pasture farming</li> <li>• milk processing</li> </ul>			<b>nature</b> <ul style="list-style-type: none"> <li>• landscape formations</li> <li>• weather</li> <li>• fauna</li> <li>• flora</li> </ul>			<b>modern life</b> <ul style="list-style-type: none"> <li>• ecology</li> <li>• tourism</li> </ul>			



## Data and methodology

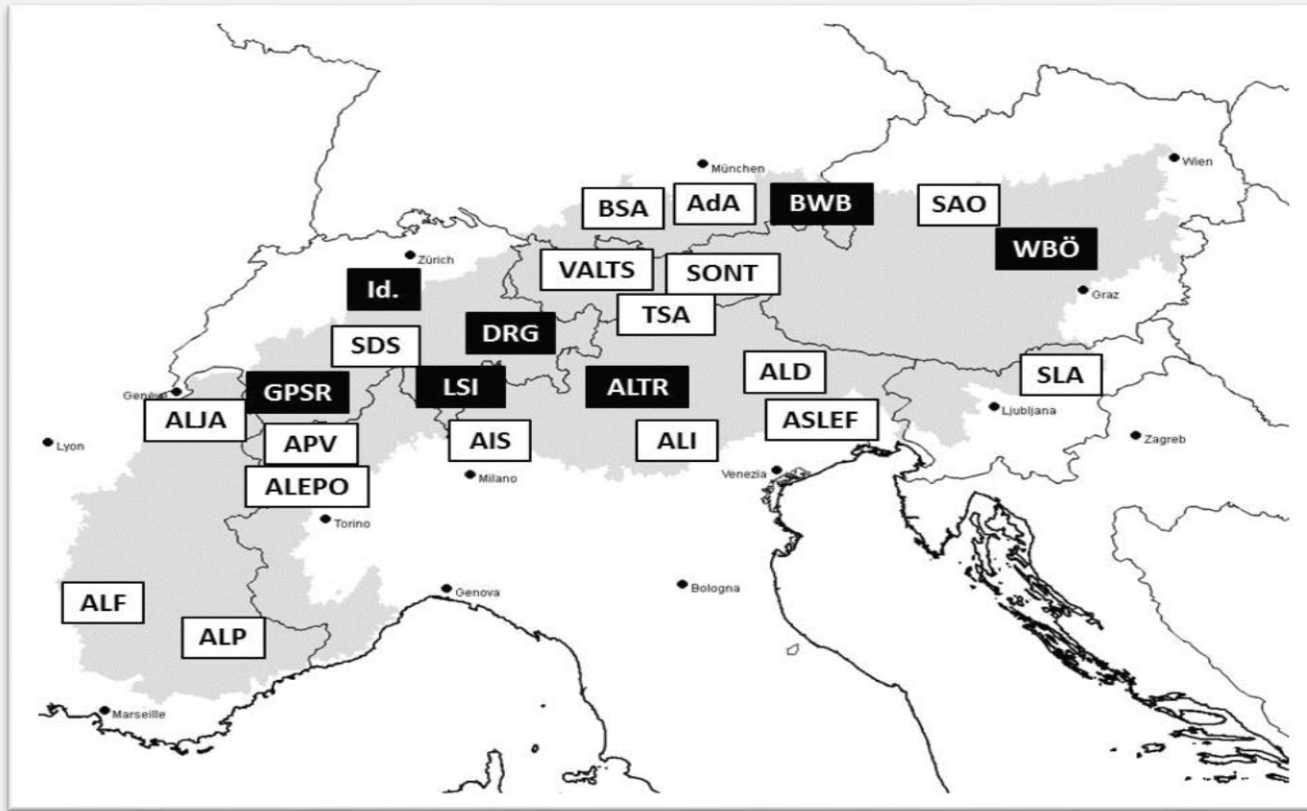
### Multiple different sources

- printed atlases/dictionaries (georeferenced)
- Digital material from project partners
- Crowdsourcing



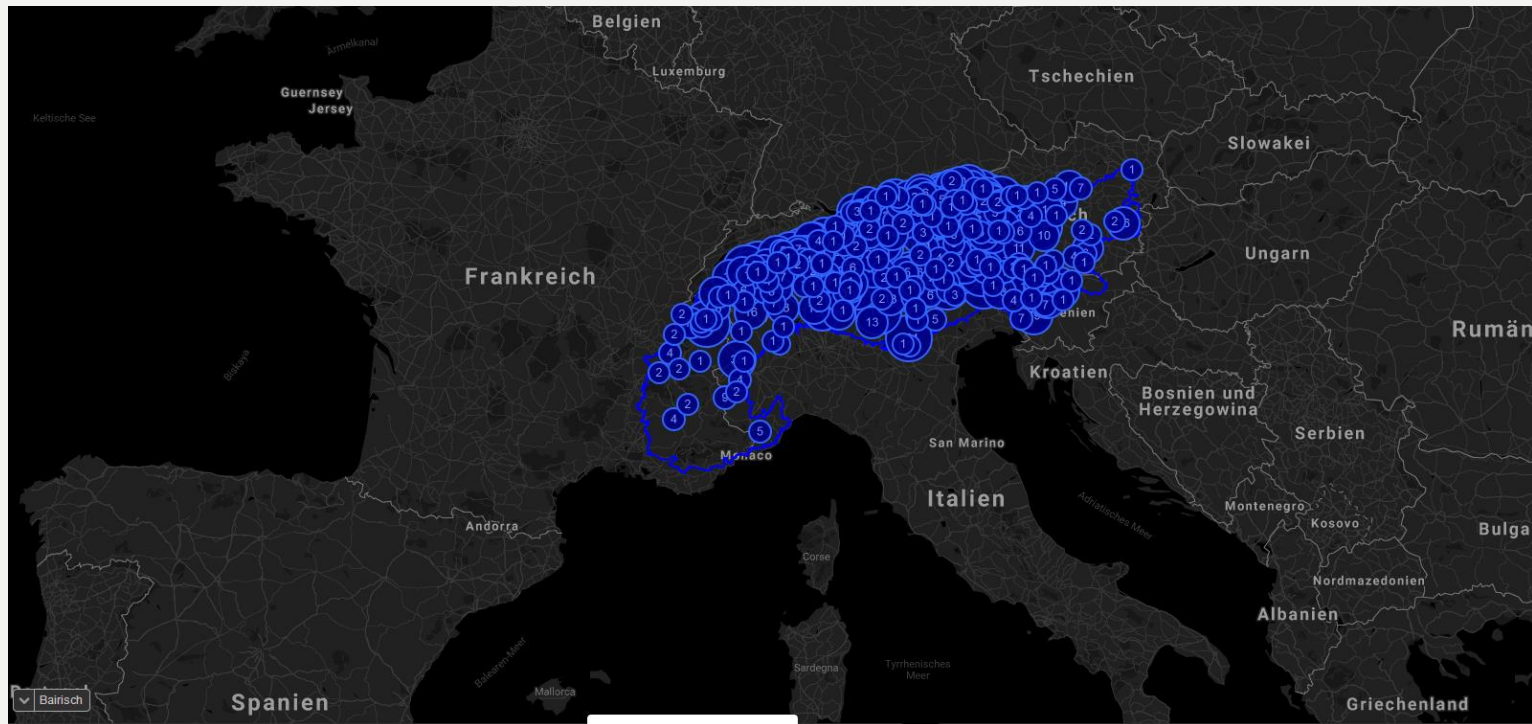


## Atlases and Dictionaries in the Alpine region



# Crowdsourcing-Tool

[www.lmu.de/verbaalpina](http://www.lmu.de/verbaalpina)



Wie sagt man zu *Begriff* in *Gemeinde*? Ihre Antwort

Wählen Sie eine Gemeinde aus.

▼ Baiisch

➤



## challenge:

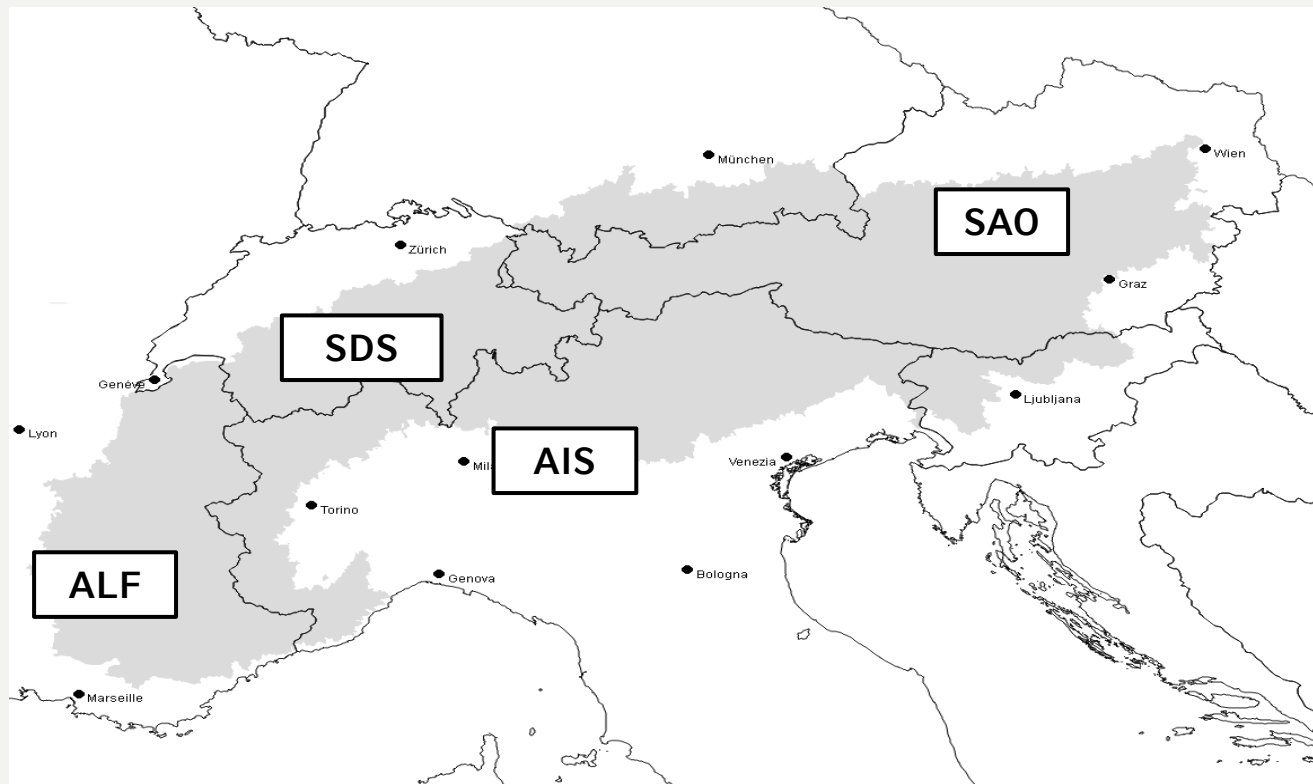
lack of uniformity of data from individual data sources

→ unification of the different transcription systems

→ process of systematic data processing:

- **Transcription**
- **Tokenization**
- **Typification**

## 2. Representation of the realm of „landscape“ in lexicographic resources





## AIS (Sprach- und Sachatlas Italiens und der Südschweiz)

### Weather phenomena

- |        |                |             |              |
|--------|----------------|-------------|--------------|
| - fog  | - dew          | - ice       | - thunder    |
| - rain | - (hoar) frost | - lightning | - wind       |
| - hail | - snow         | - rainbow   | - earthquake |

### Landscape formations

- |            |             |             |               |
|------------|-------------|-------------|---------------|
| - ground   | - rock      | - glacier   | - river       |
| - mountain | - cave      | - landslide | - stream      |
| - hill     | - avalanche | - valley    | - marsh(land) |



## Animals (Fauna)

- **wild mammals** (bear, wolf, fox, badger etc.)
- **reptiles** (lizard, slowworm, snake etc.)
- **amphibians** (frog, toad, salamander etc.)
- **worms and molluscs** (earthworm, leech, snail, slug etc.)
- **insects** (hornet, wasp, ant, glow-worm, cockroach, fly, dragonfly, butterfly etc.)
- **birds** (sparrow, robin, swallow, raven, cuckoo, owl etc.)
- **fish** (trout, eel etc.)



## Plants (Flora)

- **the tree and its parts** (branches, leaves, thorns, resin etc.)
- **wild trees** (spruce, larch, mountain pine, beech, birch, lime tree, poplar etc.)
- **wild bushes and fruits** (juniper, sloe, hawthorn, blackberry, strawberry, raspberry, blueberry, rosmarin etc.)
- **wild plants and flowers** (stinging nettle, teasel, poppy, dandelion, lily, gentian, carnation, mallow)



## F. PIANTE (Pflanzen)

L'ALBERO E LE SUE PARTI  
(Der Baum und seine Teile)

- 558 la radice; le radici  
 559 il ramo; i rami  
     Cp: il ramo piuttosto piccolo  
     – il ramo piuttosto grande  
     – i piccoli rami secchi  
 560 il ramo forcuto  
     Cp: espressioni verbali  
     – il nodo del legno  
 561 la verga (la bacchetta)  
 562 la foglia; le foglie  
     Cp: le foglie appassite  
     – il fogliame  
 563 la spina; le spine  
 564 la scorza  
 565 scortecciare (un albero)  
 566 il midollo  
 567 il sugo (dell'albero)  
     Cp: espressioni verbali  
 568 la resina  
     Cp: la resina liquida del larice

## ALBERI SELVATICI (Wildwachsende Bäume)

- 569 l'abete rosso (N)  
 570 il larice (N)  
 571 il pino cembro (N)  
     Cp: i semi del pino cembro  
     – la pigna del pino cembro  
 572 il mugo (N)  
 573 il pino selvatico (N)  
 574 la pina dell'abete (N)  
     Cp: la pina del larice  
     – la pina del pino  
 575 il legno del pino (N)  
     Cp: la scheggia resinosa  
 576 i rami dei coniferi (N)  
     Cp: le foglie dei coniferi  
 577 l'abete bianco  
 578 il faggio  
     Cp: il legno del faggio  
     – la faggiuola  
     – il carpino  
 579 la betulla (N)  
 580 il tiglio (N)  
 581 il rododendro (N)  
 582 l'ontanello (N)  
 583 l'ontano  
 584 l'olmo  
 585 il pioppo  
     Cp: il pioppo bianco  
     – il pioppo cipressino  
     – il pioppo del Canada  
     – il pioppo scapezzato  
 586 l'alberella (tremula)



# Cultural and historical linguistic unity in the multilingual Alpine region



719	Kartentitel des AIS
587 il sorbo Cp: la sorba – il sorbo montano (farinaccio)	614 il mirtillo rosso (N)
588 il frassino	615 il rosmarino Cp: il luppolo – la vitalba
589 l'acero Cp: il platano	616 la ginestra
590 l'oppio	617 la scopa
591 la rovere; I roveri Cp: la fargna – la gallozzola della quercia	618 la felce
592 portano Cp: il cerro – il sughero – la querciuola	619 l'edera
593 delle ghiande. Cp: la coppa della ghianda	620 il musco Cp: il lichene islandico
594 l'acacia Cp: l'agrifoglio	621 il fungo; i funghi Cp: specie diverse
595 l'elce (S)	PIANTE SELVATICHE E FIORI (Wildwachsende Pflanzen und Blüten)
596 il cipresso (S)	622 l'ortica
597 il lentischio (S)	623 il cardo Cp: Cirsium arvense – Carlina acaulis – Sonchus
598 l'alloro (S) Cp: le foglie dell'alloro – l'oleandro – il mirto	624 il loglio Cp: il tremolino – la sala – la graminacea
CESPUGLI E FRUTTI SELVATICI (Wildwachsende Sträucher und Waldfrüchte)	625 il papavero dei campi Cp: gluochi infantili – il papavero domestico
599 il ginepro	626 il verbasco
600 il salcio Cp: il salicone	627 l'acetosa (N)
601 la vetrice Cp: i vinchi	628 l'acetosella (N)
602 il prugnolo	629 il rabarbaro alpino (N) Cp: la farfara
603 la prugnola	630 il dente di leone (N) Cp: la cicoria selvatica
604 il biancospino Cp: il frutto del biancospino – il berberi – diverse piante spinose	631 l'euforbia (S)
605 la rosa selvatica (pianta)	632 l'attaccamani (S)
606 la coccola della rosa selvatica (il grataculo)	633 la piantaggine (S)
607 il sambuco Cp: le coccole del sambuco – l'ebbio	634 l'avena selvatica (S) Cp: il giunco
608 il rovo Cp: il rovetto	635 il crescione
609 la mora di rovo	636 Andare a cercare delle mammole.
610 la fragola Cp: la fragola di giardino – la pianta della fragola	637 la margherita dei prati Cp: formulette infantili – bellide maggiore (margheritona) – la camomilla
611 il lampone (N) Cp: la pianta del lampone	639 il giglio Cp: il gigaro – l'asfodelo – il mughetto – il narciso – il ciclamino
612 la coccola del ginepro (N)	640 il colchico (N) Cp: lo zafferano primaticcio
613 il mirtillo (N) Cp: la pianta del mirtillo	640a la genziana (N)
	641 il garofano
	642 la malva

## Stimuli which appear in (almost) all 4 atlases

	AIS	ALF	SDS	SAO
fog				
(to) rain				
(to) hail				
dew				
frost				
(to) snow				
lightning				
(to) thunder				
root				
branch				
mountain ash				
moon				

## Data gathered via Crowdsourcing

### Most frequent concepts (in descending order)

#### Fauna

1) cow	10) calf	21) squirrel	ox	chick	chicken
3) piglet	13) donkey	29) mosquito	rabbit	bee	marmot
4) horse	14) ant	duck	swallow	mare	billy goat
5) pig	17) foal	fly	mole	mule	lizard
6) lamb	18) dog	horsefly	wasp	rat	toad
					pigeon

#### Flora

2) potato	23) leaf	branch	forest	elderberry	barley	apple seed	mullein
12) tree	26) carot	oak	parsley	blueberry	top of the tree	bush	dandelion
15) foliage	30) fungus	onion	bark	beech	apple wedge	rhododendron	



## Landscape formations

7) mountain	ground	hill
11) rock	mountain peak	
16) stream	valley	

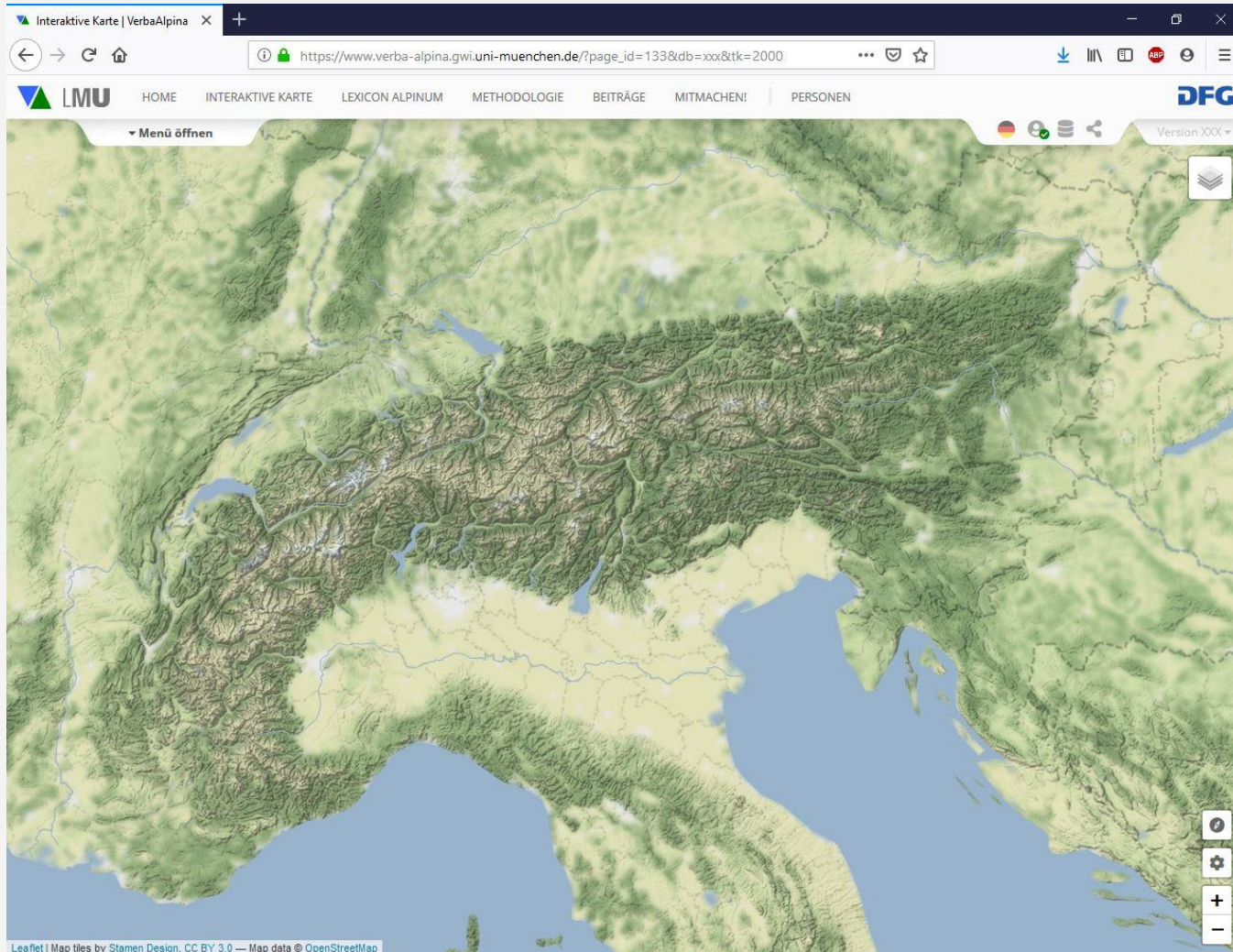
## Weather

19) es regnet heftig	fog	it clouds over
27) (to) start to rain in drops	(to) snow	(to) rain
it`s about to rain	it thundered	(to) freeze

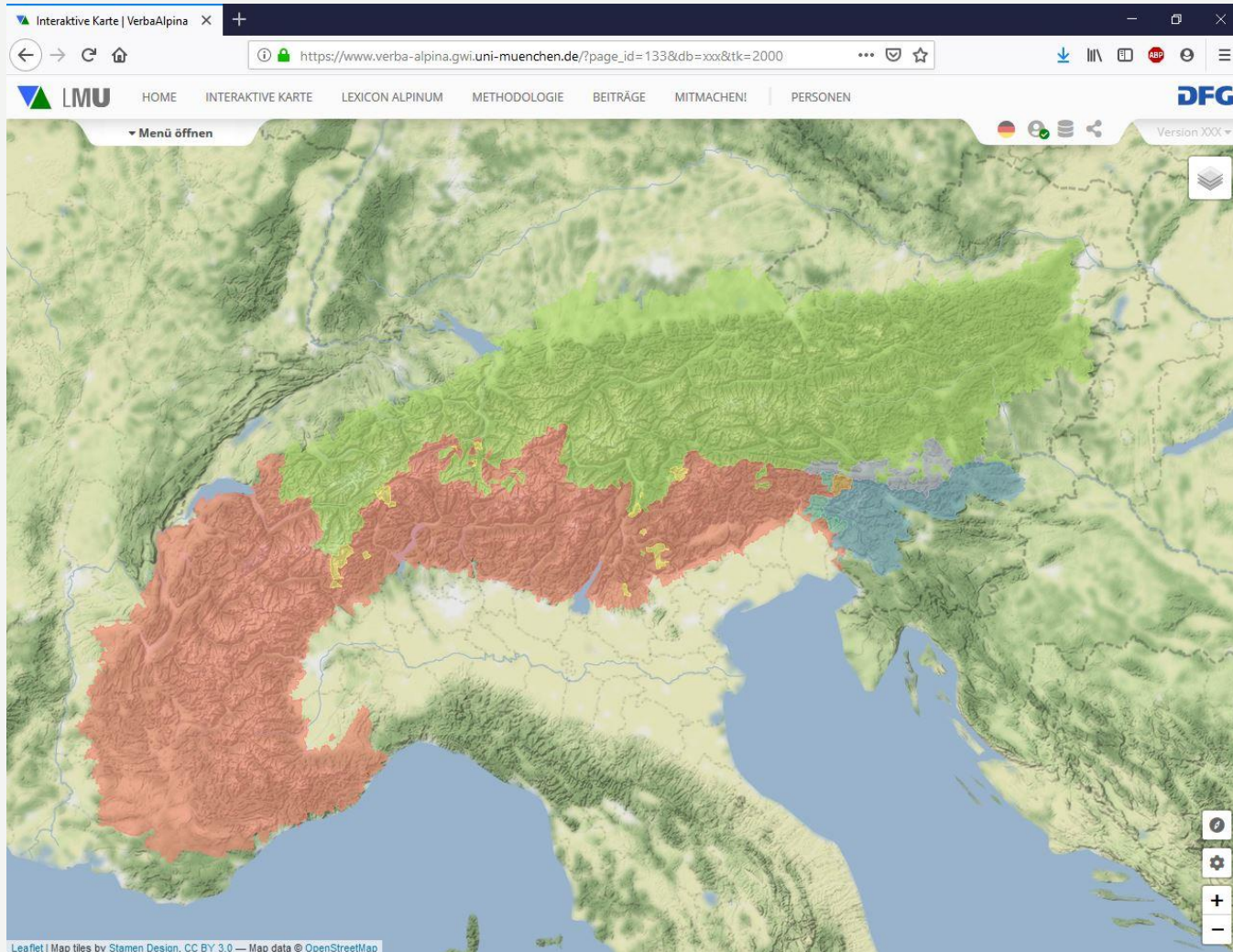


## 4. Some examples of our data

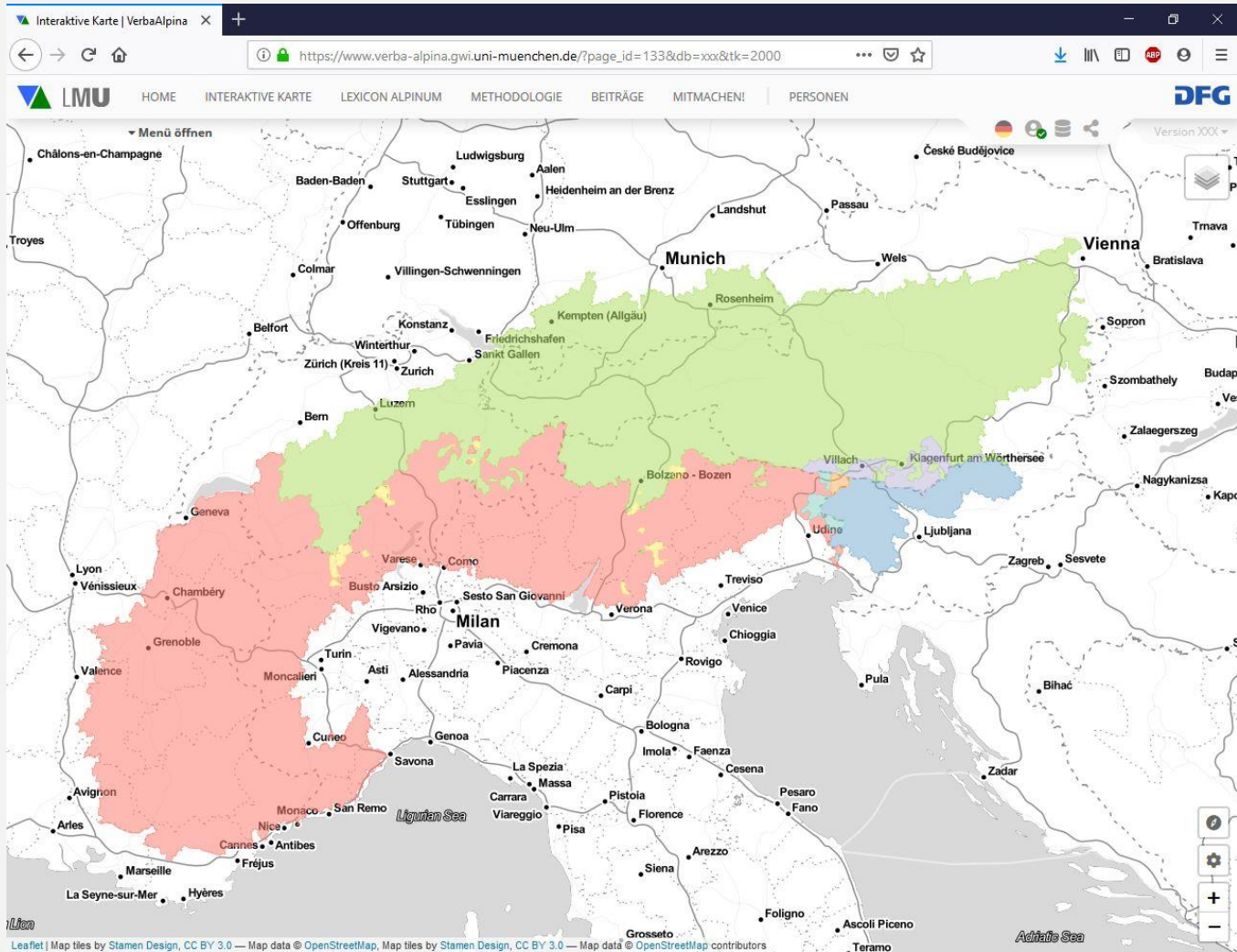
- bilberry / lingonberry
- dandelion
- fog
- frost







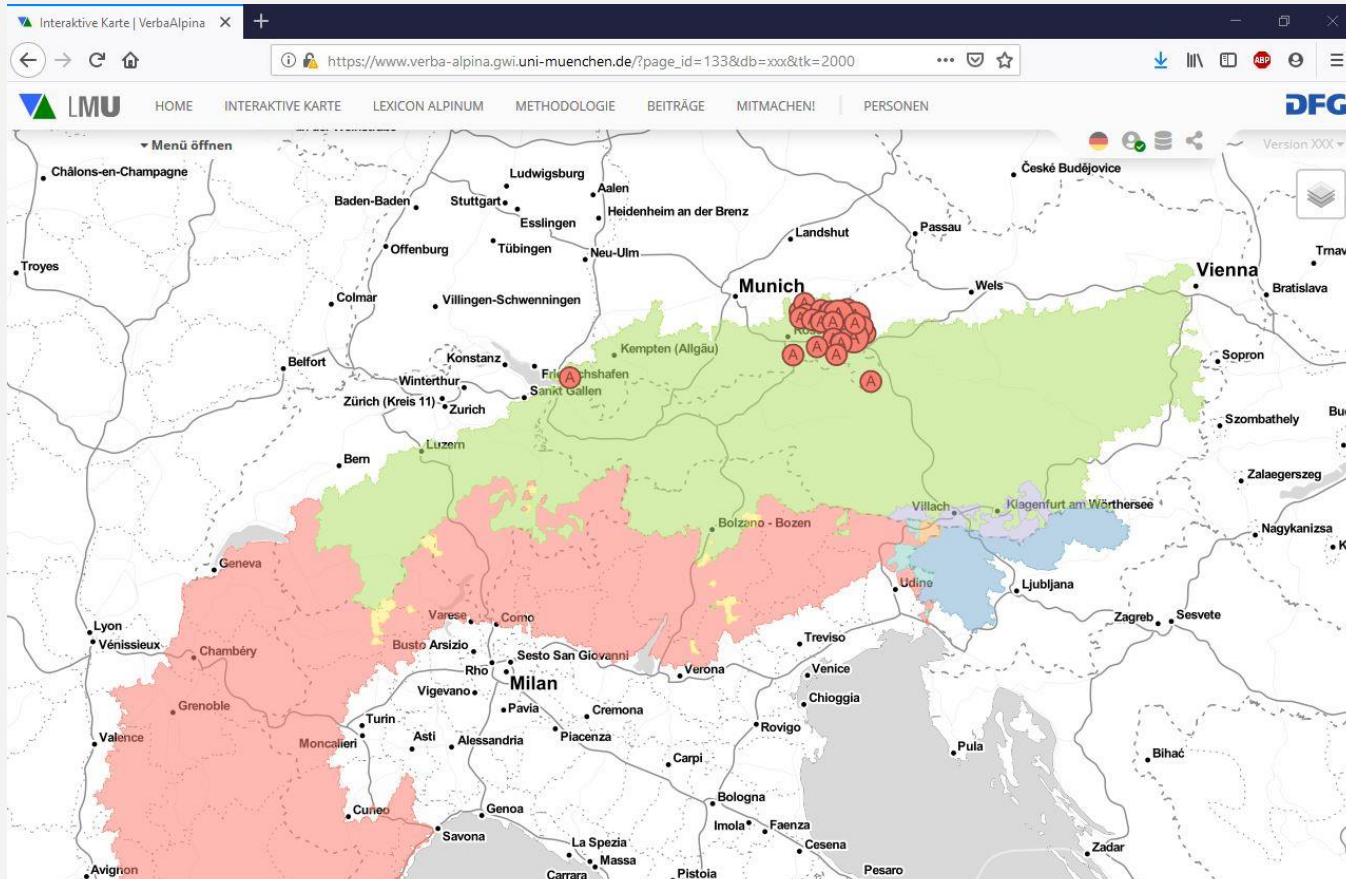
# Cultural and historical linguistic unity in the multilingual Alpine region



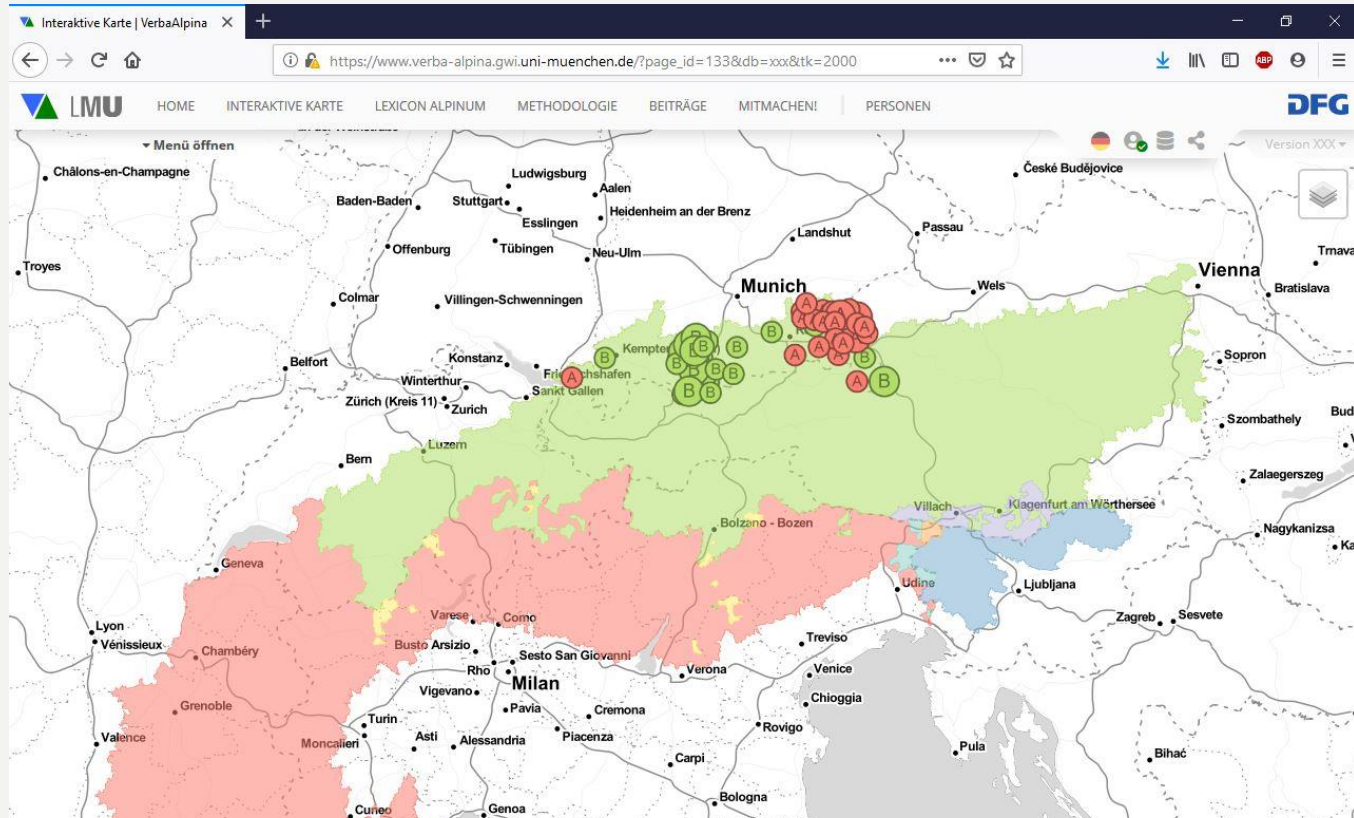


# bilberry / lingonberry





naming acc. to **shape** e.g. *Aug-/Äug-* `eye`  
*Äugleinbeere*

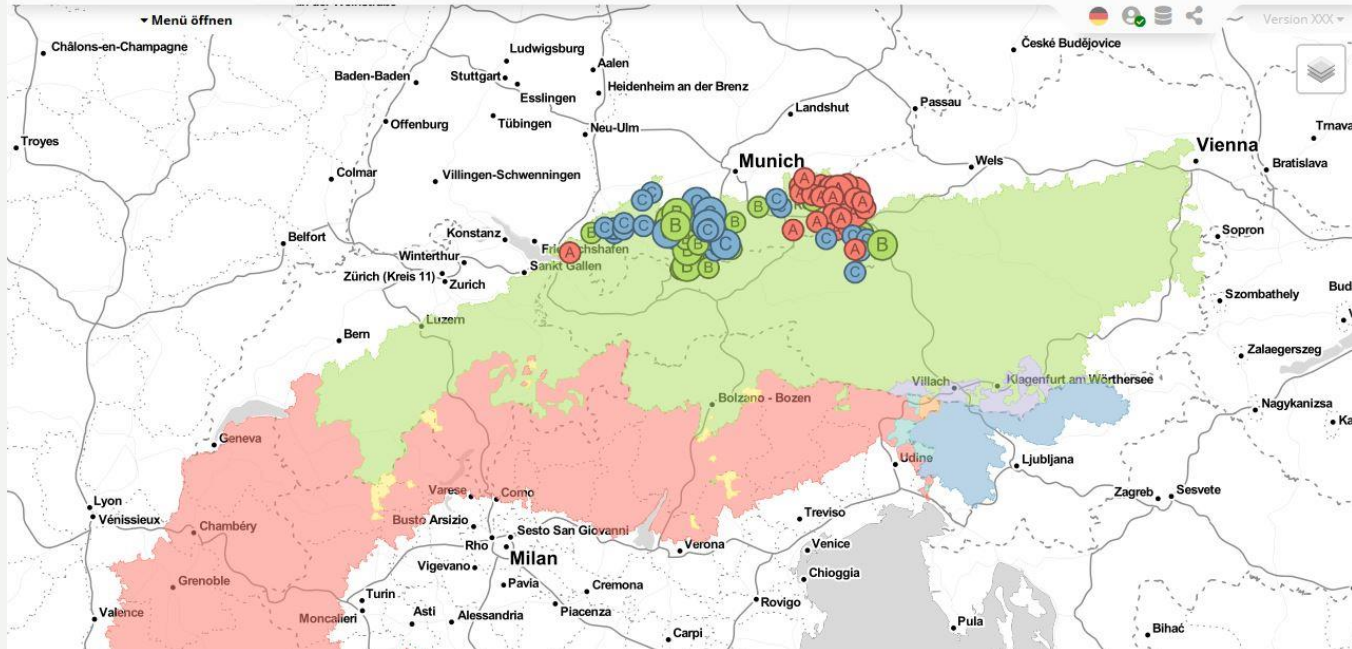


naming acc. to **colour** e.g. *Blau-* `blue`, *Schwarz-* `black`  
*Blaubeere*, *Schwarzbeere*

Interaktive Karte | VerbaAlpina

https://www.verba-alpina.gwi.uni-muenchen.de/?page\_id=133&db=xxx&tk=2000

LMU HOME INTERAKTIVE KARTE LEXICON ALPINUM METHODOLOGIE BEITRÄGE MITMACHEN! PERSONEN DFG

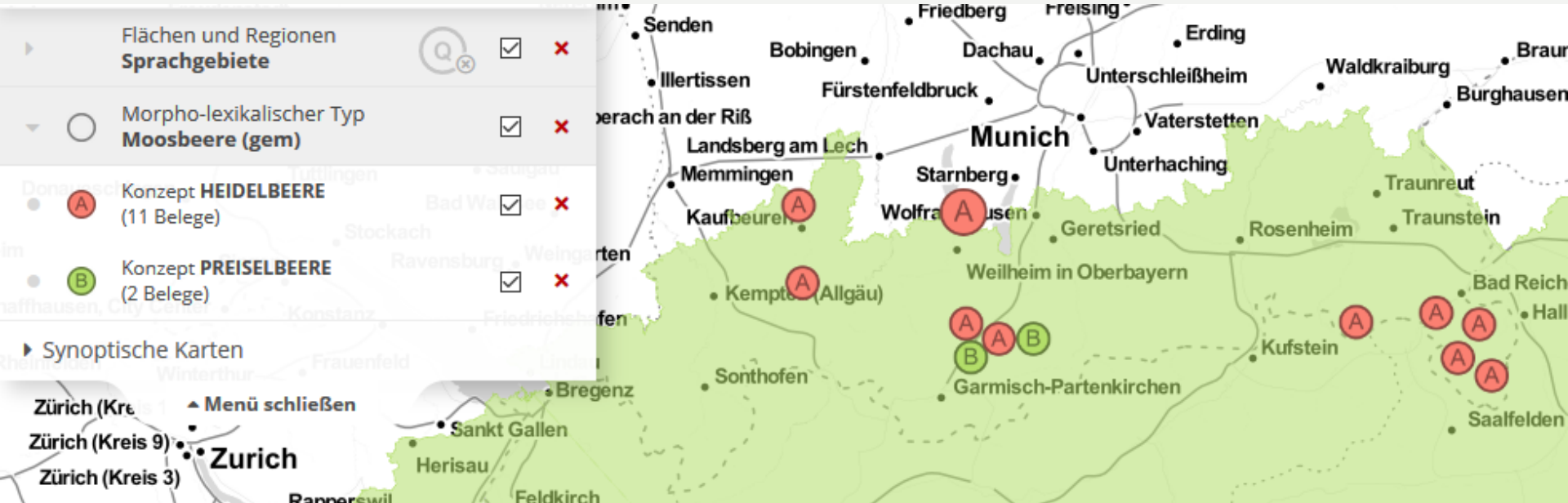


Menü öffnen

naming acc. to **place**  
e.g. *Moos-* `moor`, *Rausch-* `bush` (lat. *resces*),  
*Heide-* `heath`  
*Moosbeere, Rauschbeere, Heidelbeere*

© VerbaAlpina 2019





*Moosbeere*  
expression → meaning



Flächen und Regionen  
**Sprachgebiete**

Morpho-lexikalischer Typ  
**Rauschbeere (gem)**

- A Konzept **HEIDELBEERE**  
(4 Belege)
- B Konzept **PREISELBEERE**  
(1 Beleg)

Synoptische Karten

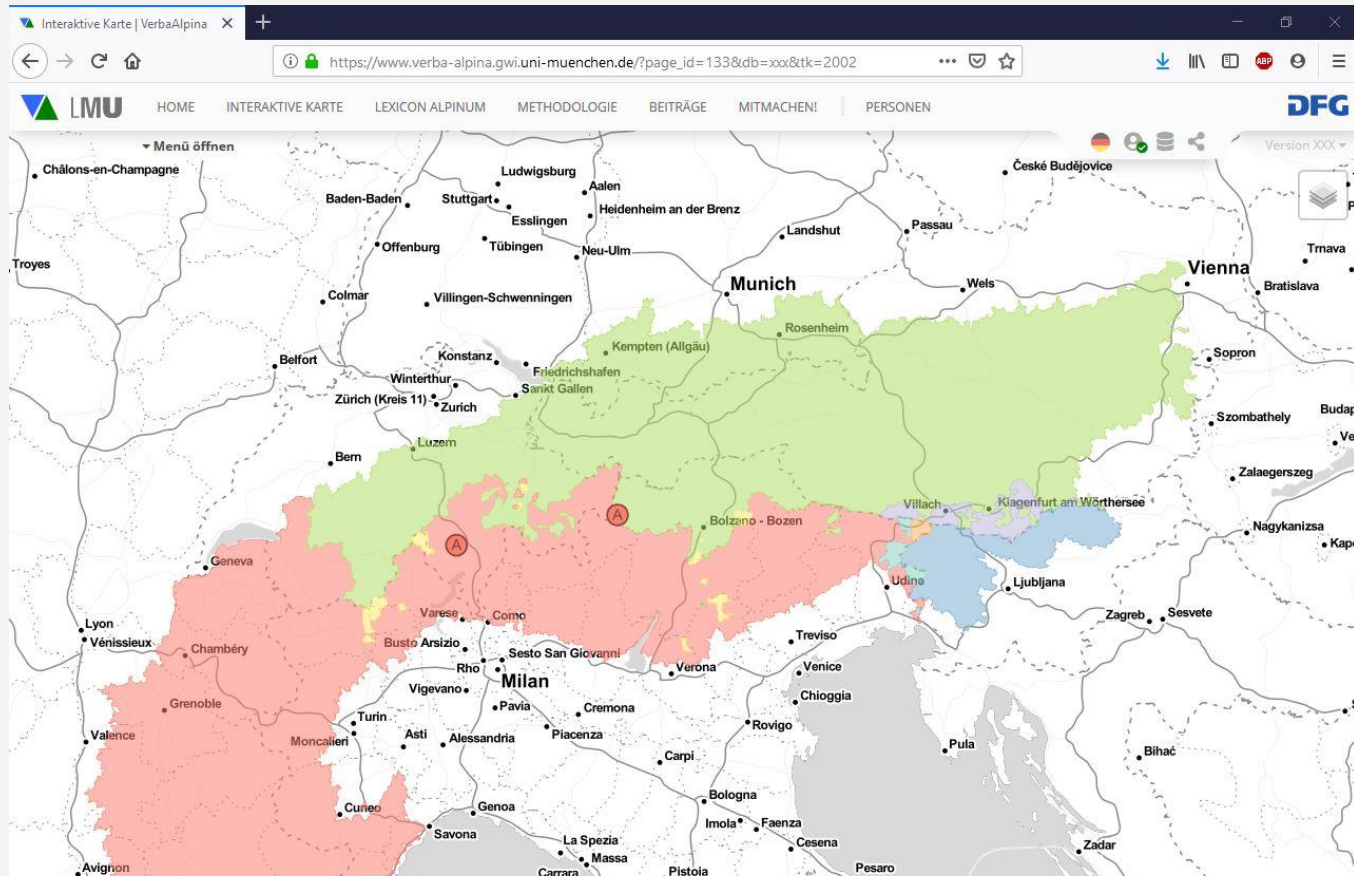
Zürich (Kre... ▲ Menü schließen



*Rauschbeere*  
expression → meaning

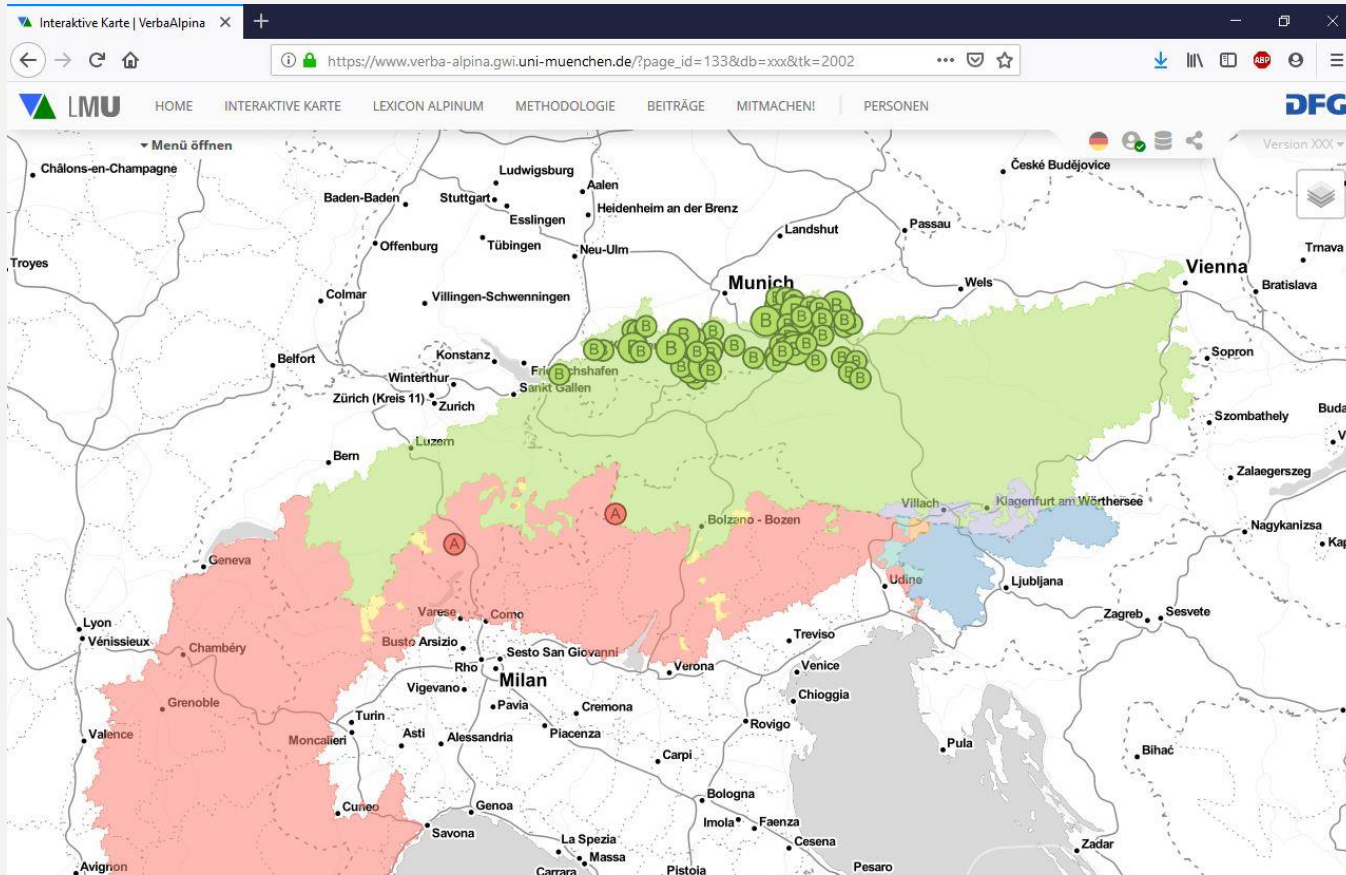
# dandelion



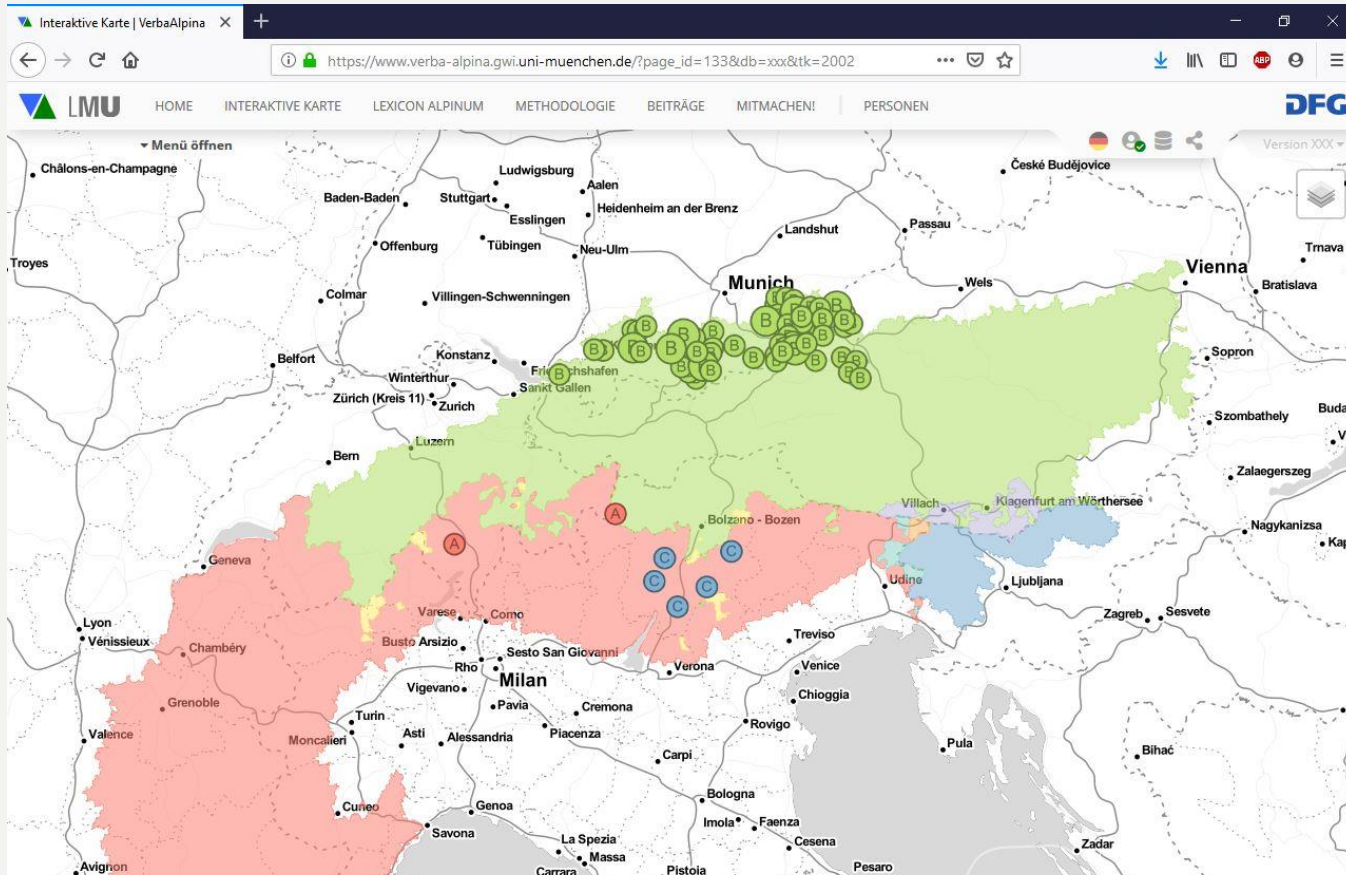


tooth + animal (lion) e.g. *dente di leone*  
`dandelion`

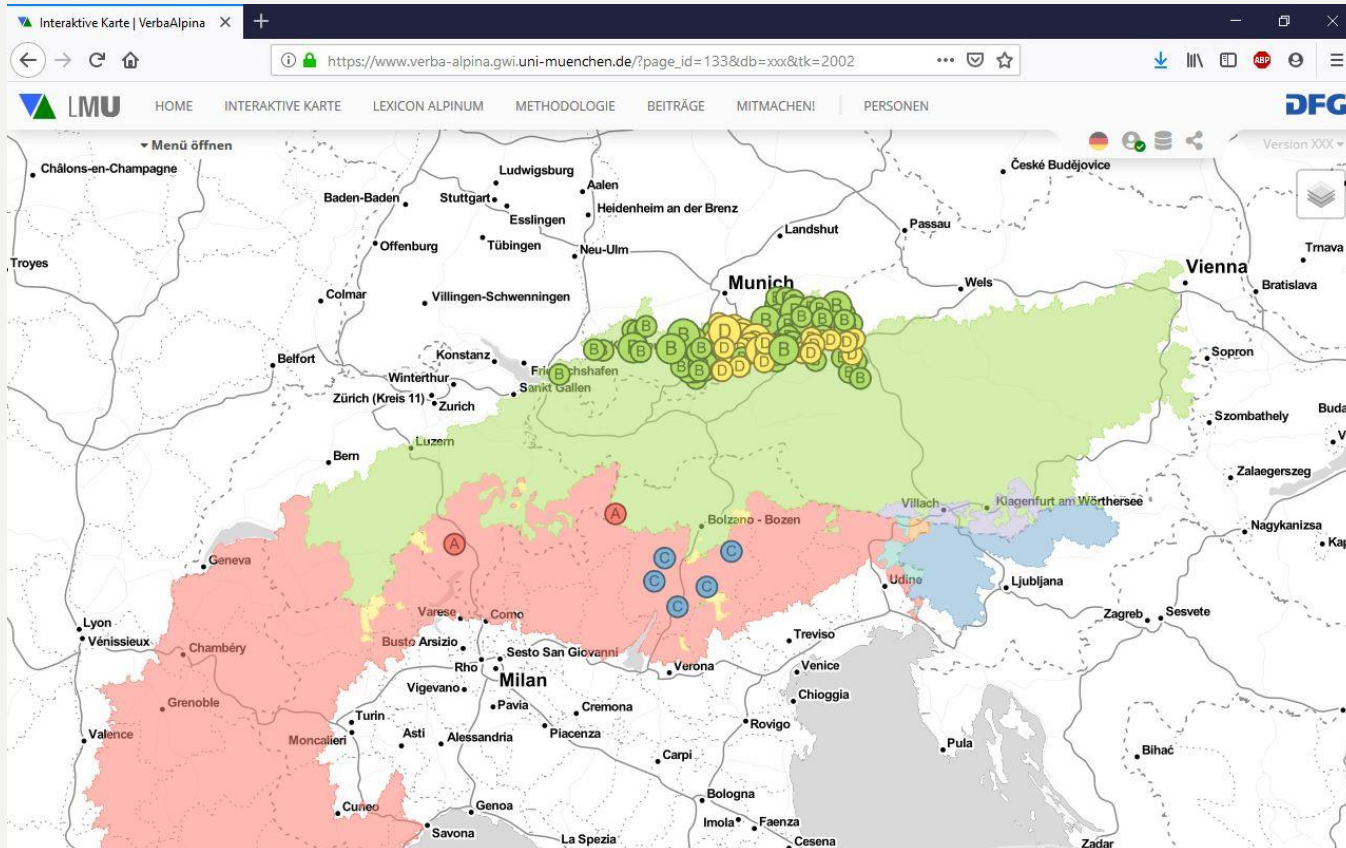




tooth & animal (lion) e.g. *Löwenzahn*  
`dandelion`

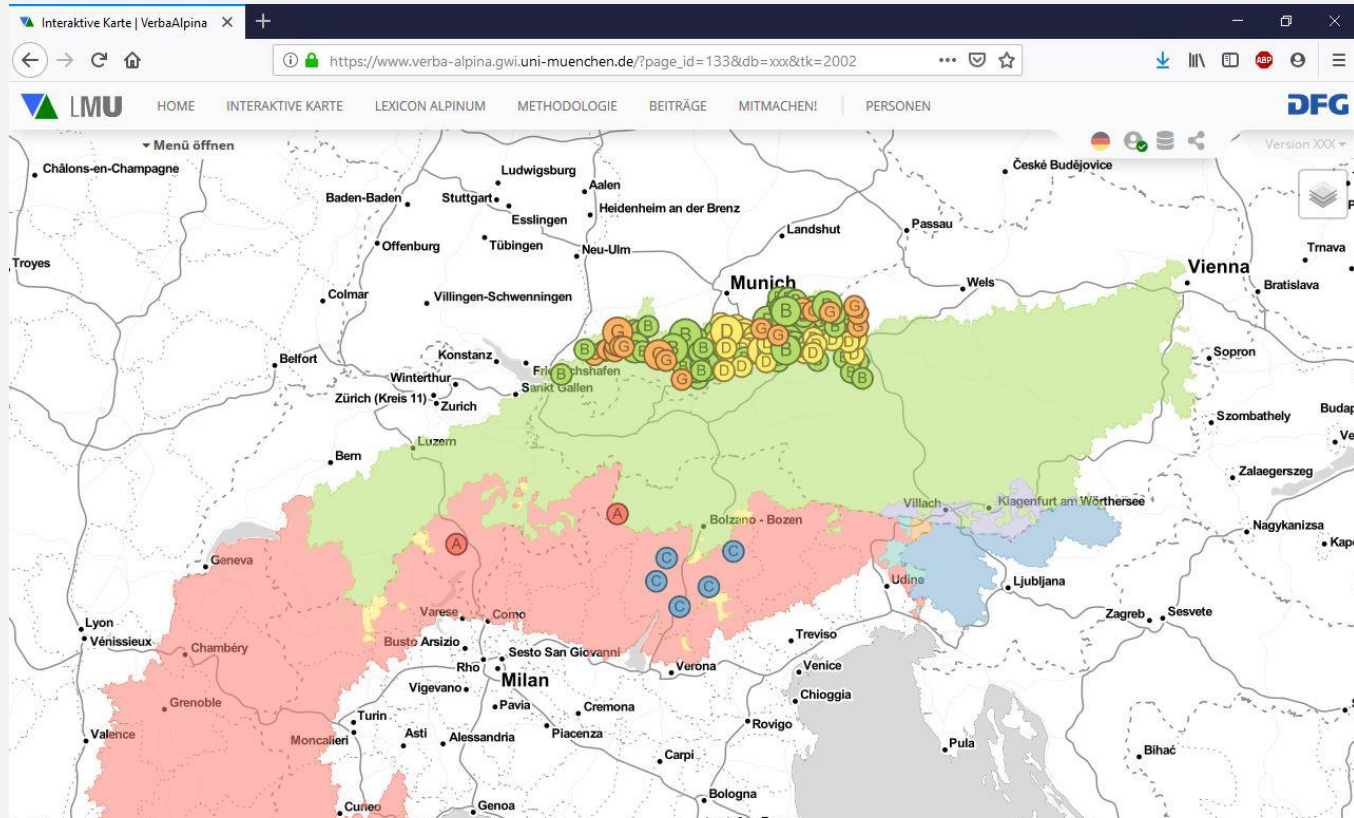


tooth + animal (dog) e.g. *dente di cane*  
`dandelion



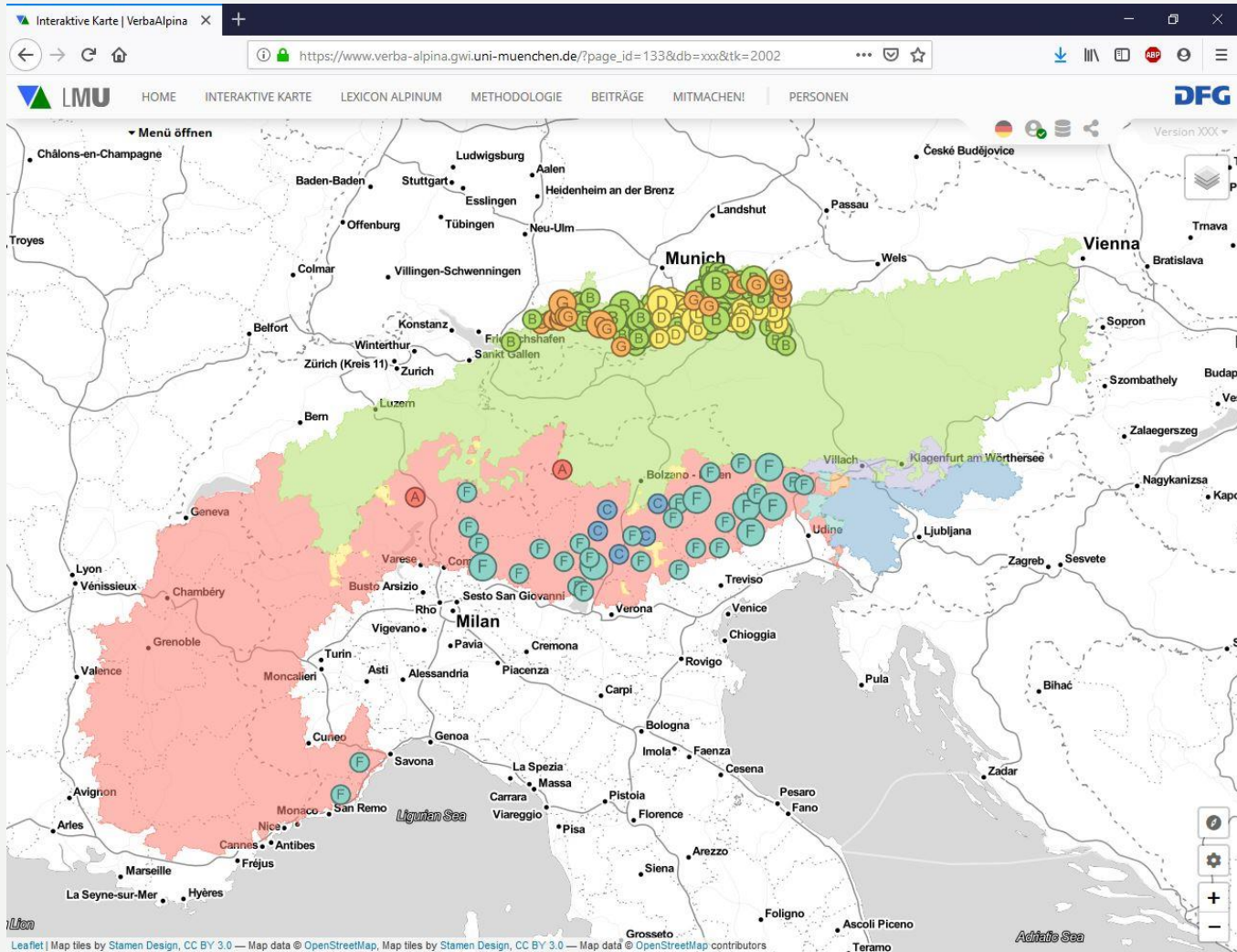
animal (pig) + flower e.g. *Saublume*  
`dandelion`

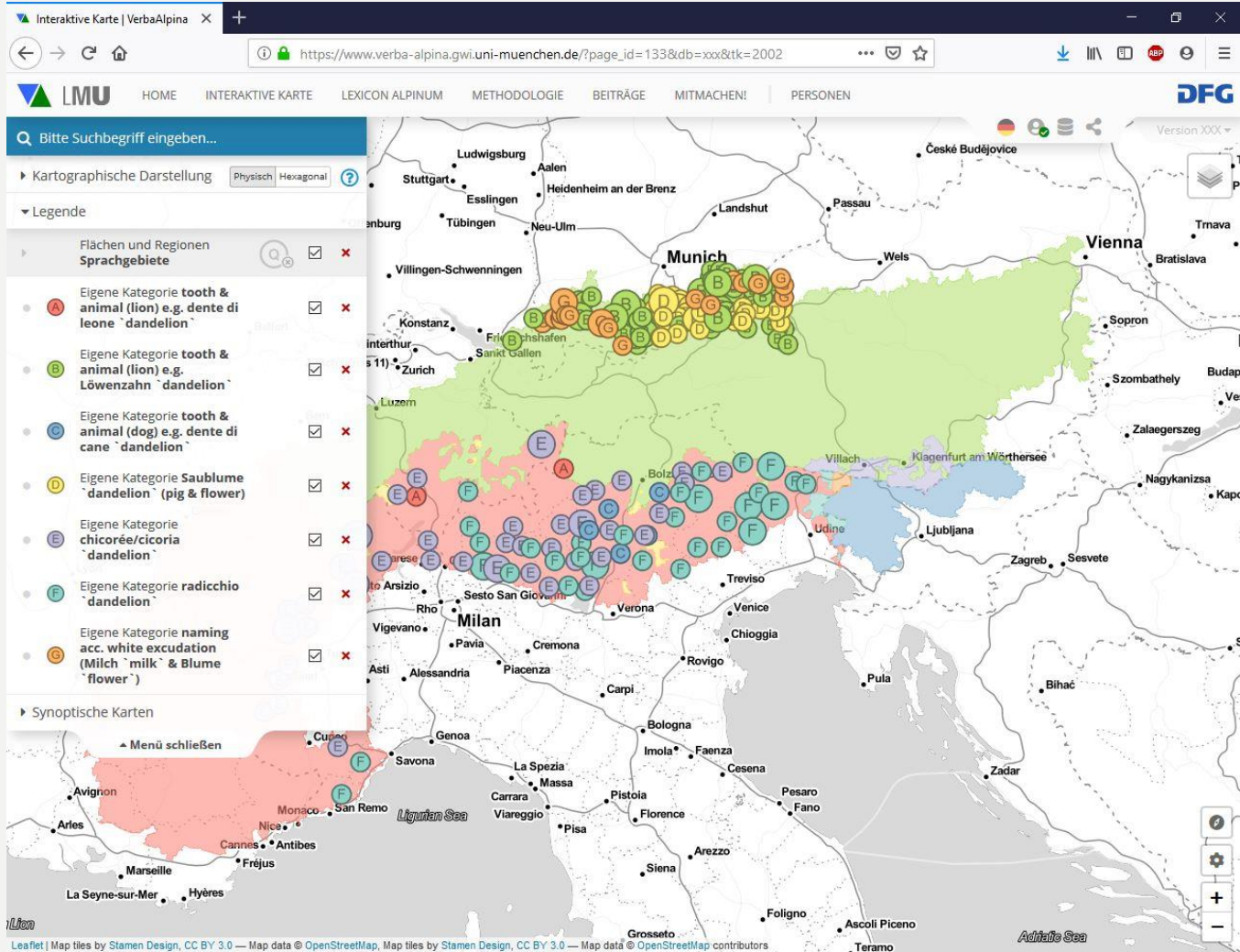




naming acc. to white liquid (*Milch`milk` + Blume`flower`*)  
*Milchblume*

# Cultural and historical linguistic unity in the multilingual Alpine region









Interaktive Karte | VerbaAlpina

https://www.verba-alpina.gwi.uni-muenchen.de/?page\_id=133&db=xxx&tk=2002

LMU HOME INTERAKTIVE KARTE LEXICON ALPINUM METHODOLOGIE BEITRÄGE MITMACHEN! PERSONEN DFG

**A** **son** **gno**

**d, en dɜ li'om** (Einzelbeleg)

Phonetischer Typ	(nicht typisiert)	VA
Morpho-lexikalischer Typ	dente di lion / dente di leone (roa) <b>T C C T</b>	VA
Basistyp	(nicht typisiert)	VA
Quelle	AIS 630#1.42 (Sonogno)	
Konzept	LÖWENZAHN	

**B** **lyvpæmt'sân**

**Schönau a. Königssee** (Einzelbeleg)

Phonetischer Typ	(nicht typisiert)	VA
Morpho-lexikalischer Typ	Löwenzahn (gem) <b>D D</b>	VA
Basistyp	(nicht typisiert)	VA
Quelle	BSA 2766#1 sob345soe (Schönau am Königssee)	
Konzept	LÖWENZAHN	

Leaflet | Map tiles by Stamen Design, CC BY 3.0 — Map data © OpenStreetMap contributors, Imagery © Mapbox

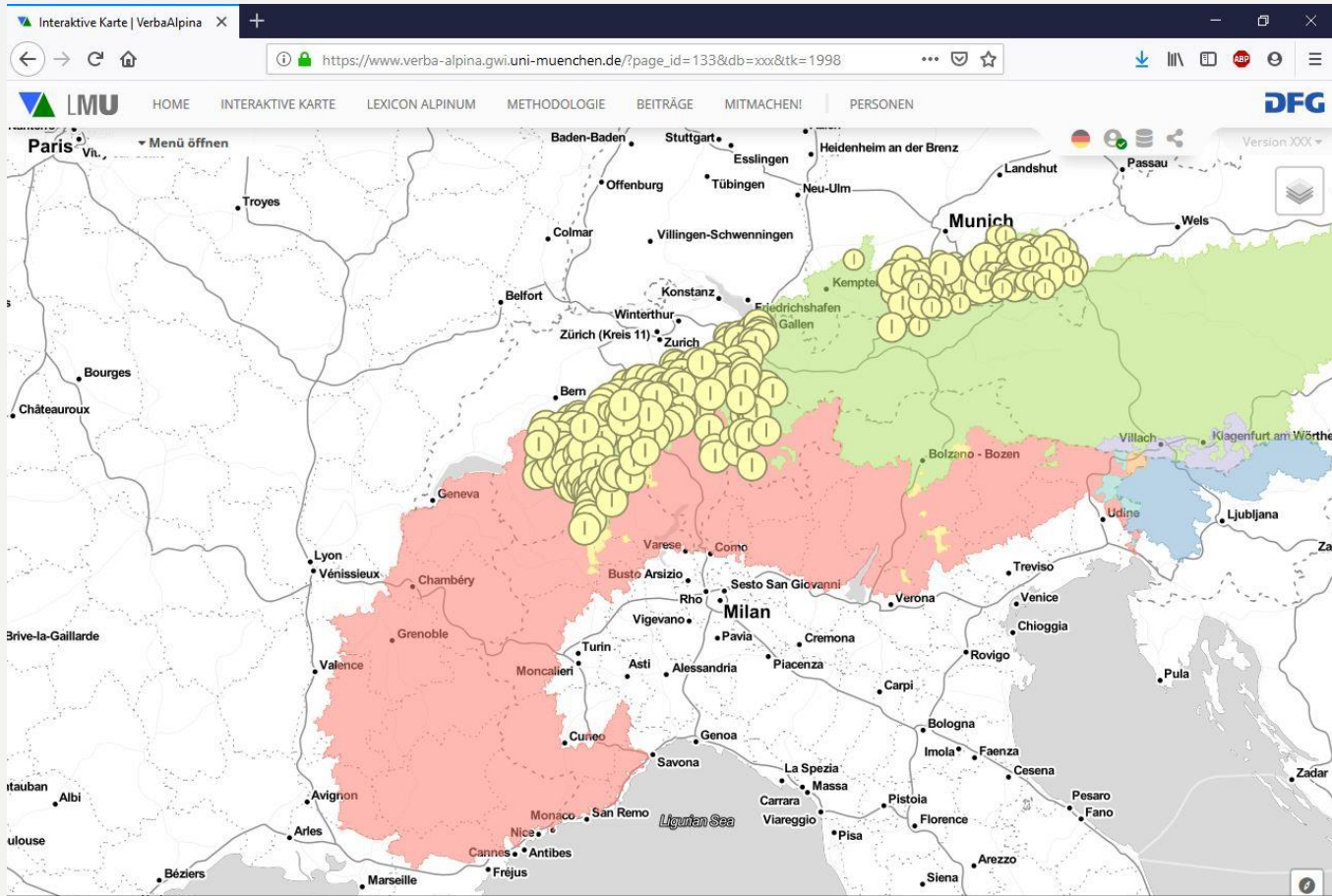




# fog

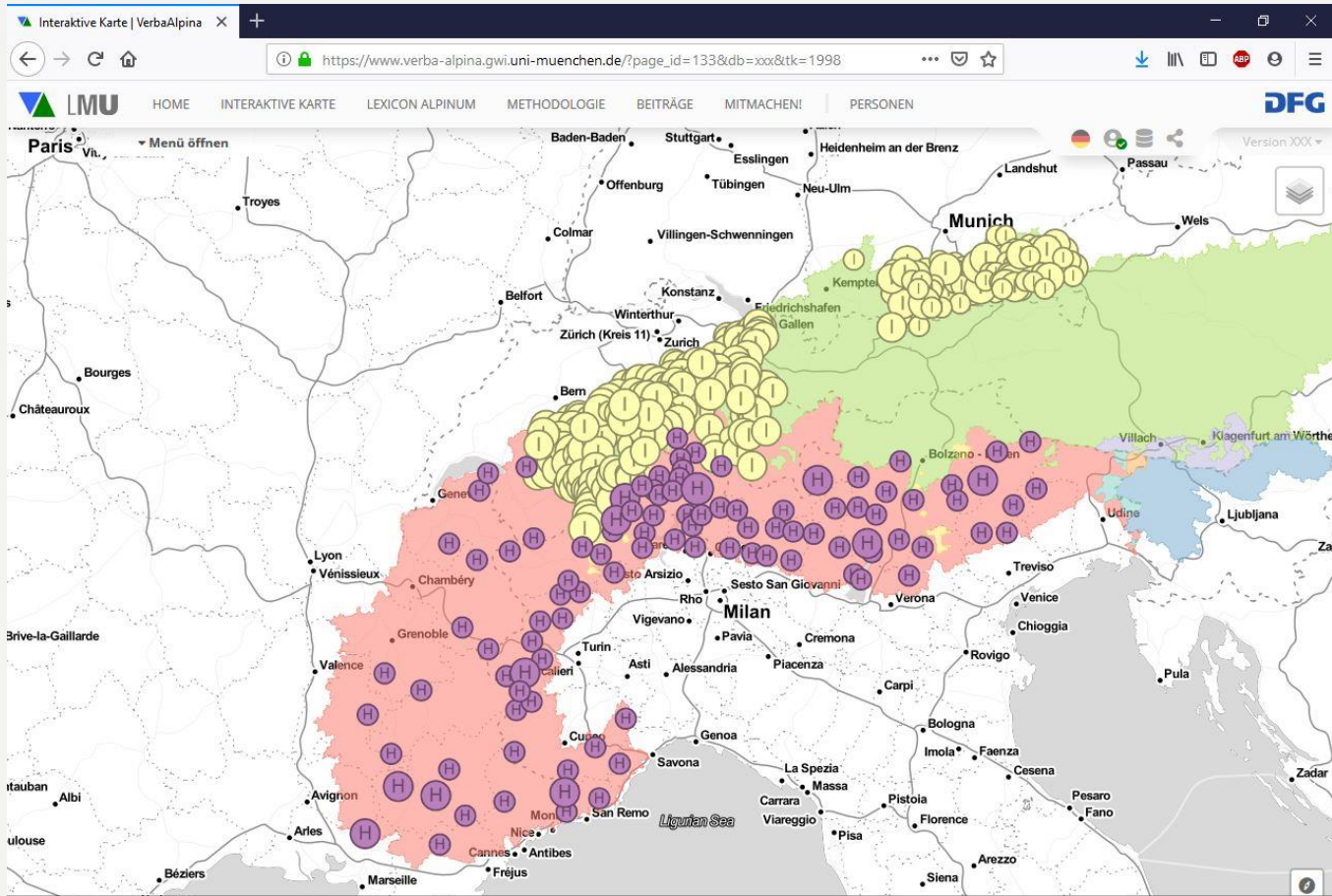






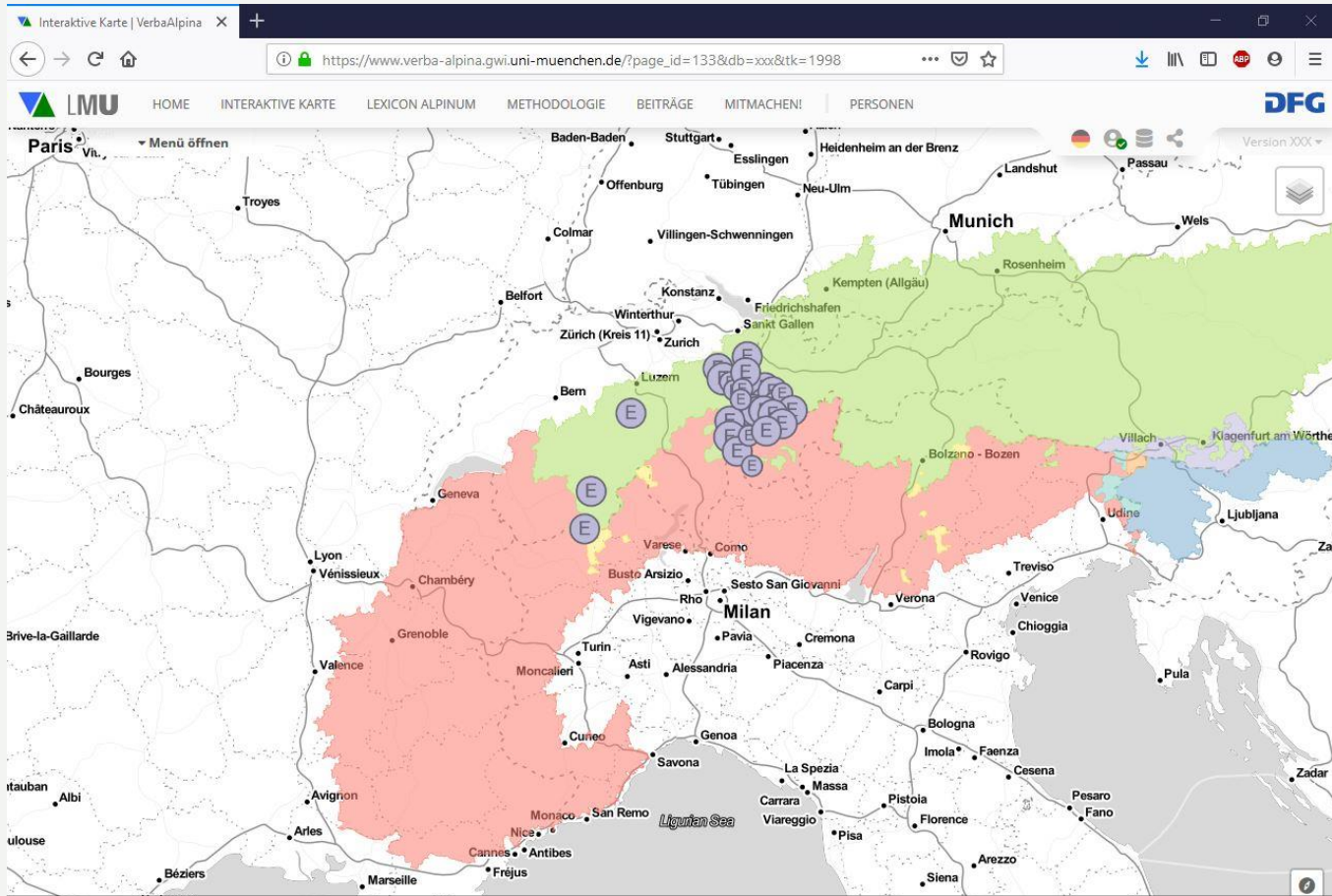
*Nebel`fog`*





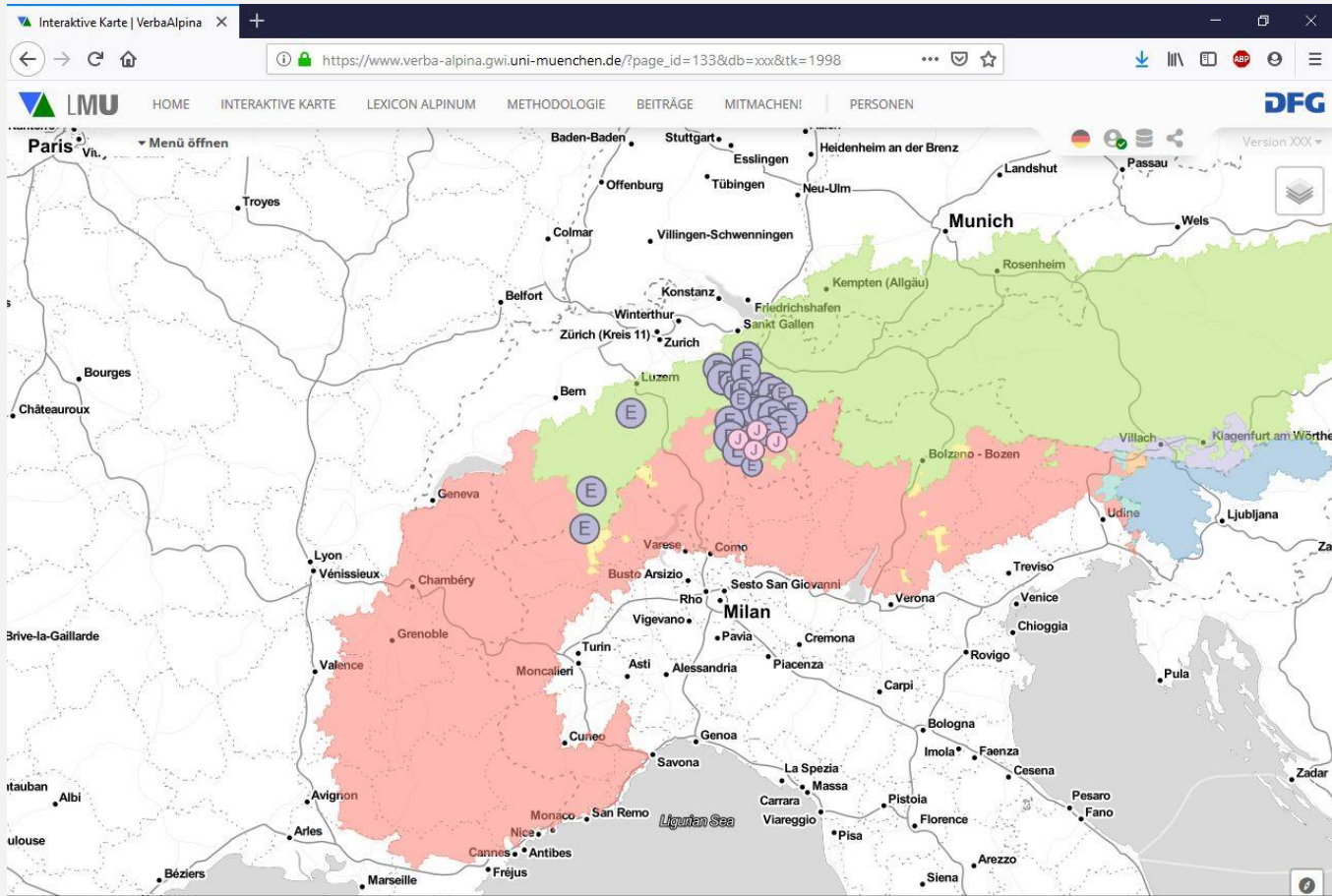
*nebbia`fog`*





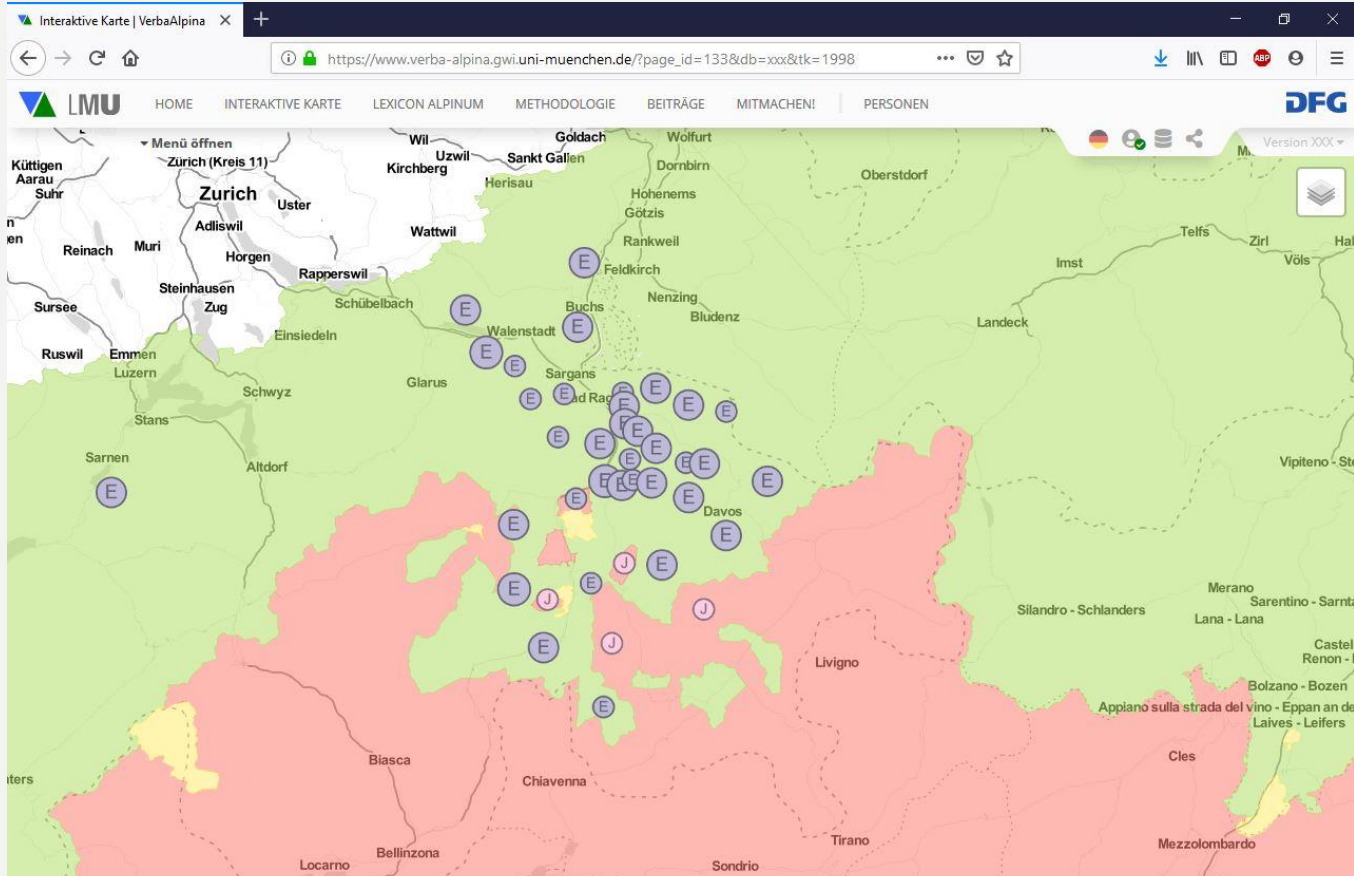
*Brente `fog`*





*brenta `fog`*

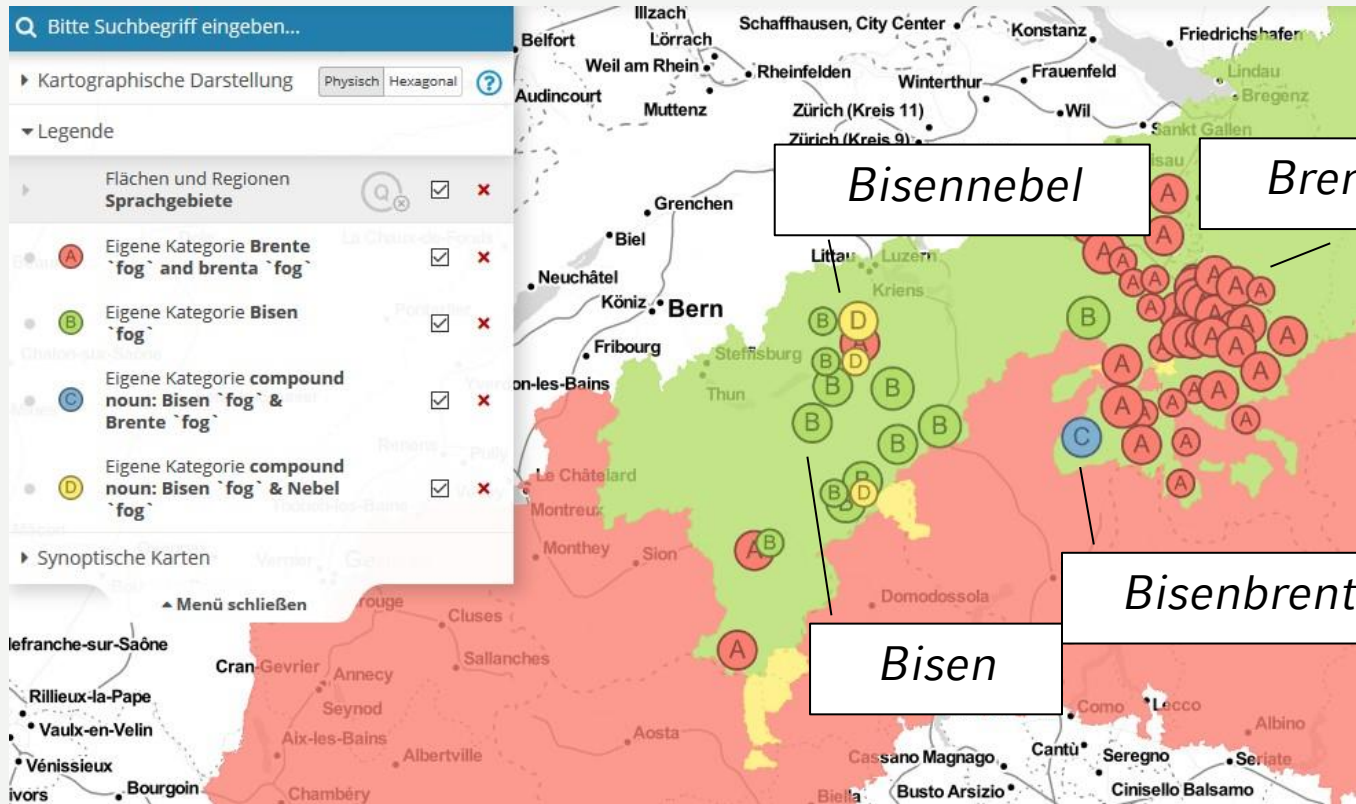




*Brente `fog`  
brenta `fog`*



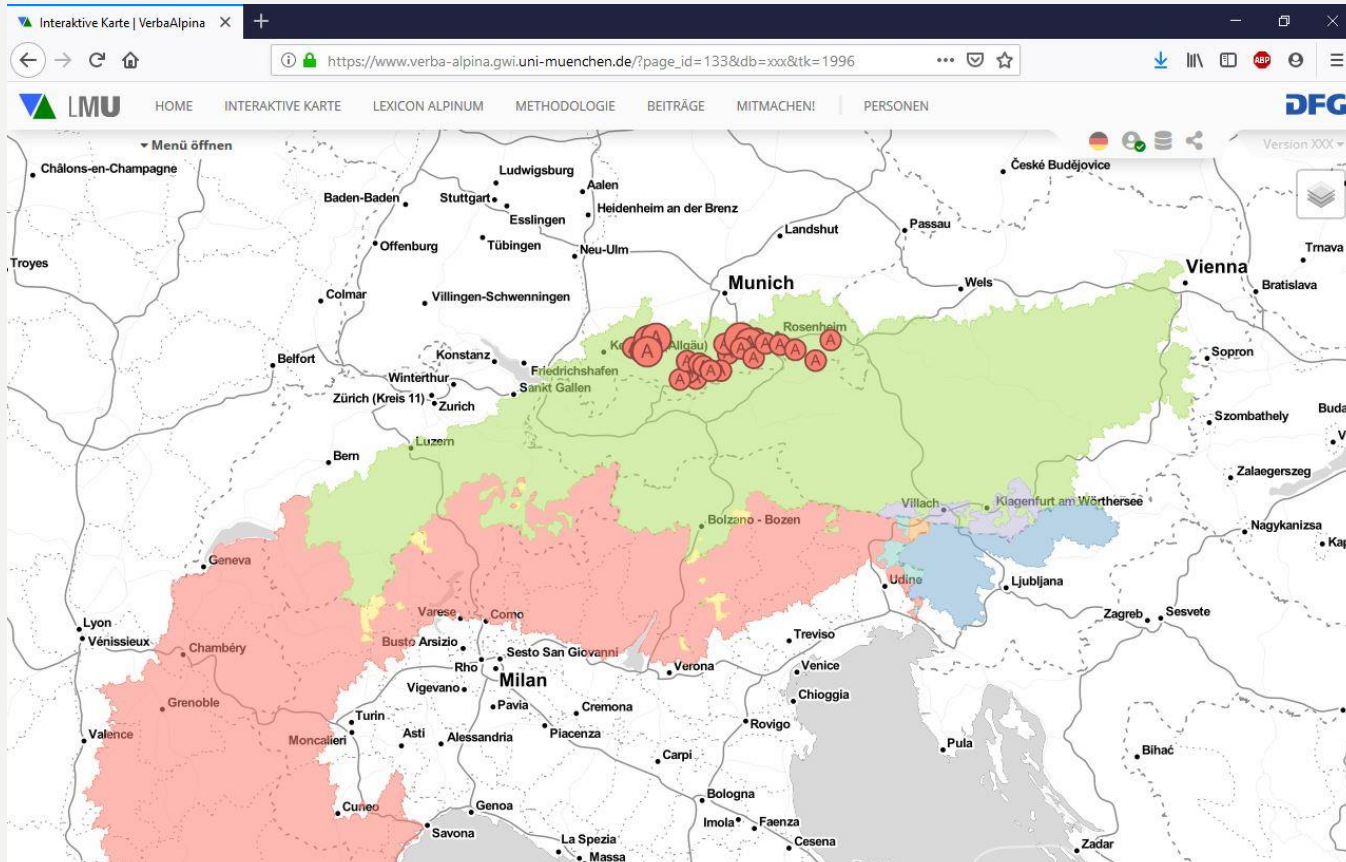
# fog



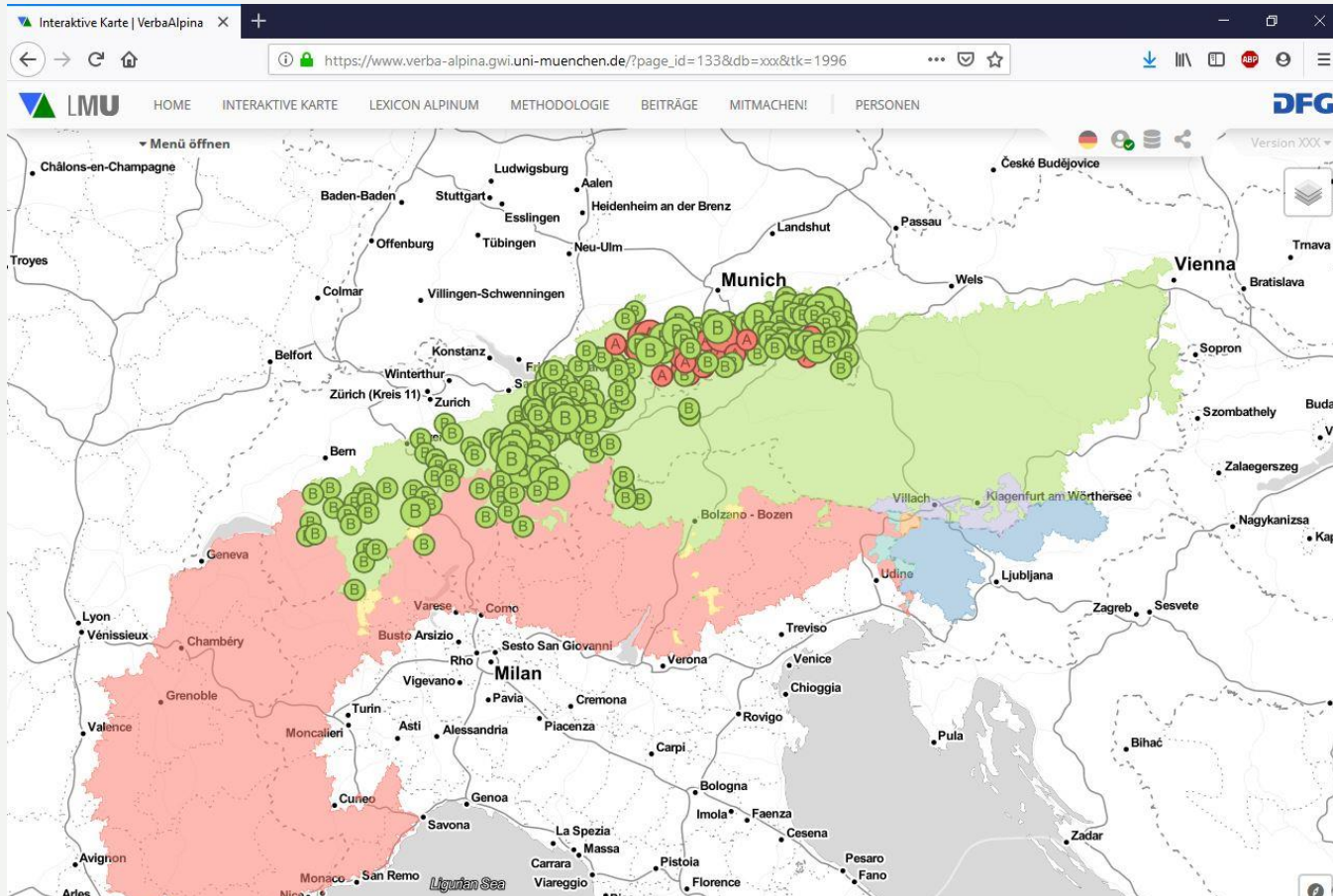


# frost

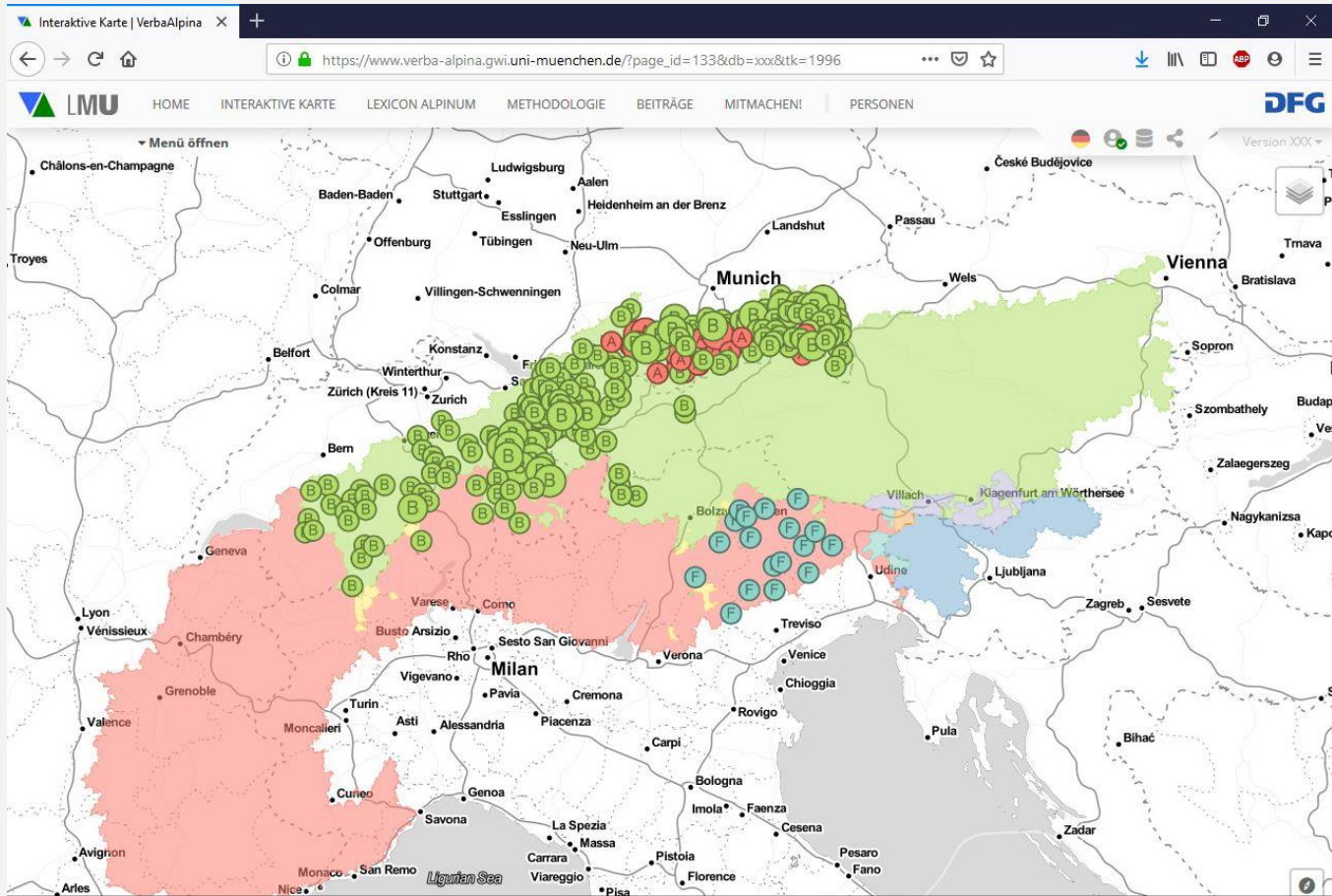




compound nouns: *-hang*  
`adherence/covering`



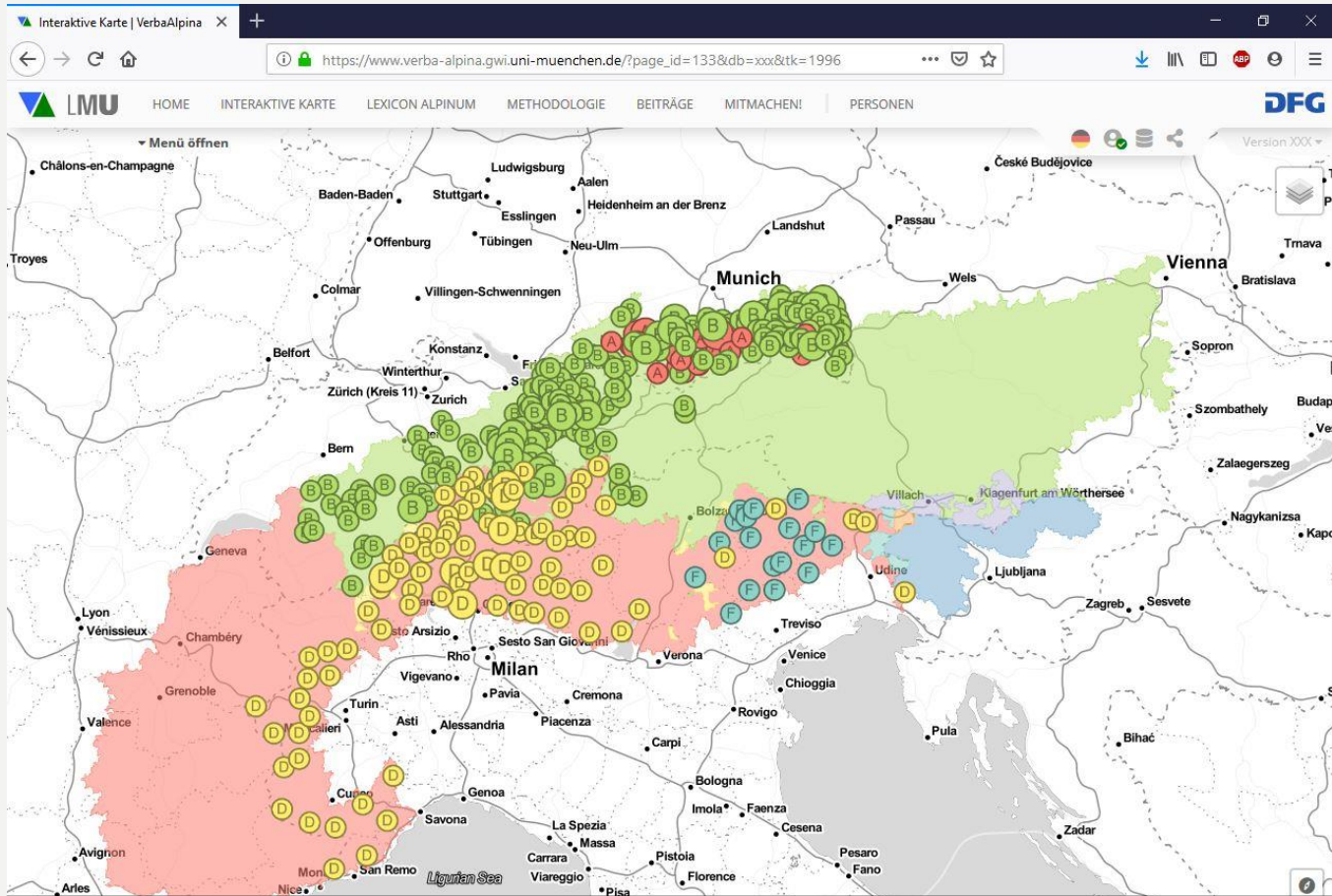
compound nouns: *-reif`frost`*



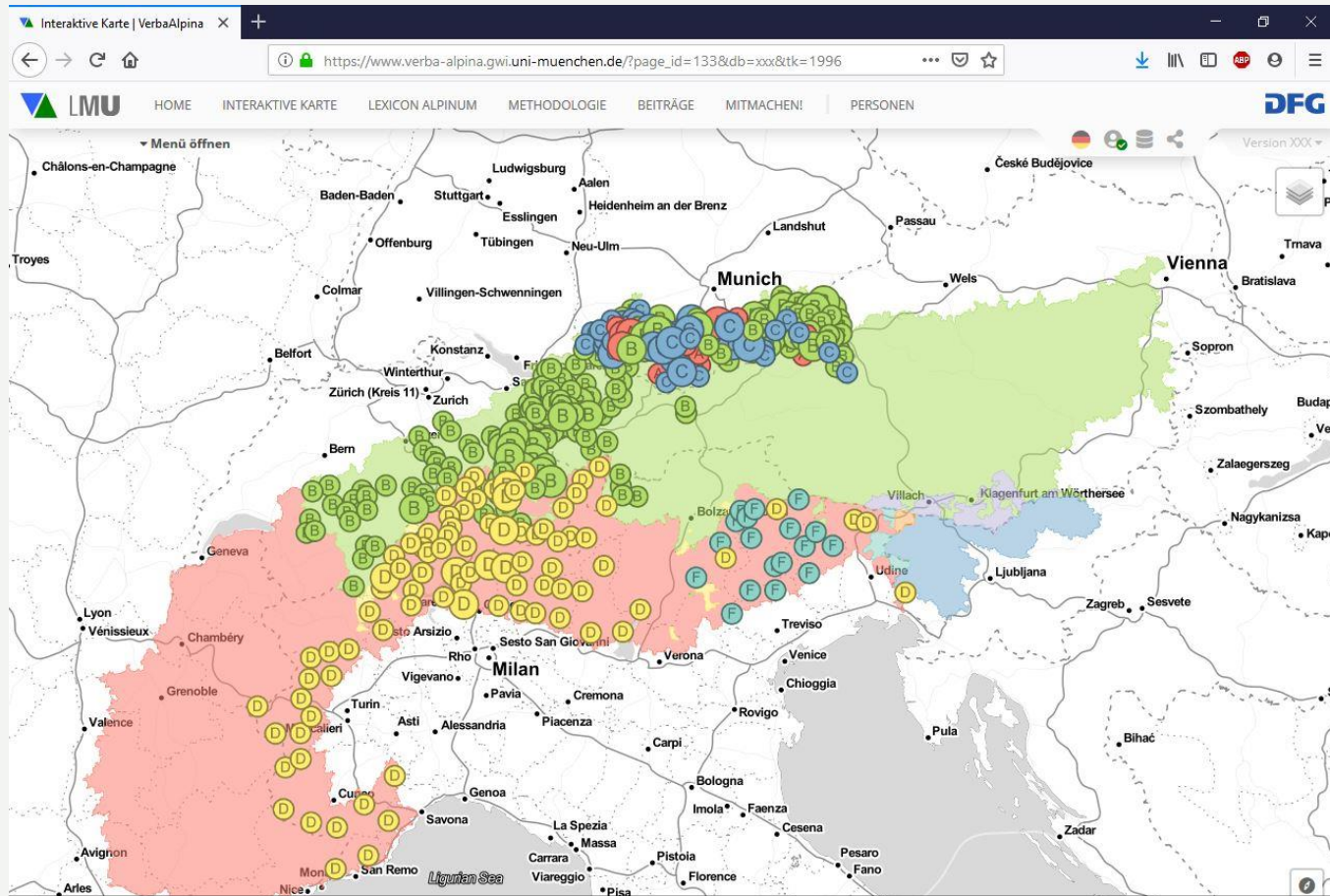
*brise/brezza* `frost`







*pruine/brina* `frost`







in fact a  
derivation  
*be-reim?* →

The screenshot shows the VerbaAlpina website interface. The browser address bar displays the URL: [https://www.verba-alpina.gwi.uni-muenchen.de/?page\\_id=133&db=xxx&tk=1996](https://www.verba-alpina.gwi.uni-muenchen.de/?page_id=133&db=xxx&tk=1996). The navigation menu includes: HOME, INTERAKTIVE KARTE, LEXICON ALPINUM, METHODOLOGIE, BEITRÄGE, MITMACHEN!, and PERSONEN. The DFG logo is visible in the top right corner.

Two data cards are overlaid on the map:

- Rosenheim Card:**
  - Phonetischer Typ: (nicht typisiert) VA
  - Morpho-lexikalischer Typ: Bereim (gem) T S B VA
  - Basistyp: (nicht typisiert) VA
  - Quelle: BSA 2530#1 sob277pan (Pang/Aising)
  - Konzept: RAUREIF (Wikidata)
- Ramosch Card:**
  - Phonetischer Typ: (nicht typisiert) VA
  - Morpho-lexikalischer Typ: prüine / brina (roa.f.) T C VA
  - Basistyp: prüina (lat.) G VA
  - Quelle: AIS 375#1 9 (Remüs - Ramosch)
  - Konzept: REIF

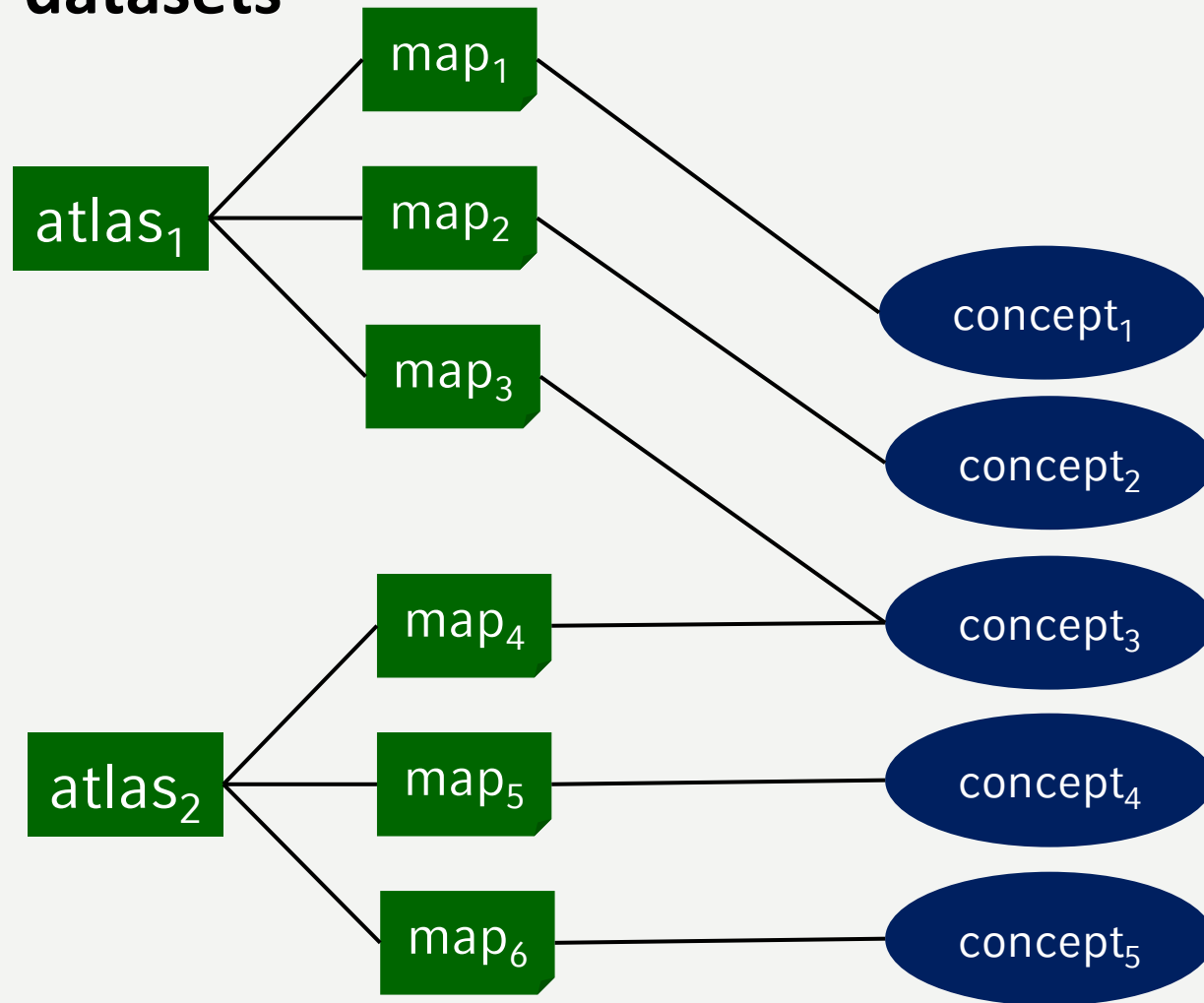
The map background shows a geographical area with various place names and linguistic markers (circles with letters) indicating data points.

[https://www.verba-alpina.gwi.uni-muenchen.de/?page\\_id=133&db=xxx&tk=1996#close](https://www.verba-alpina.gwi.uni-muenchen.de/?page_id=133&db=xxx&tk=1996#close) en Design, CC BY 3.0 — Map data © OpenStreetMap contributors



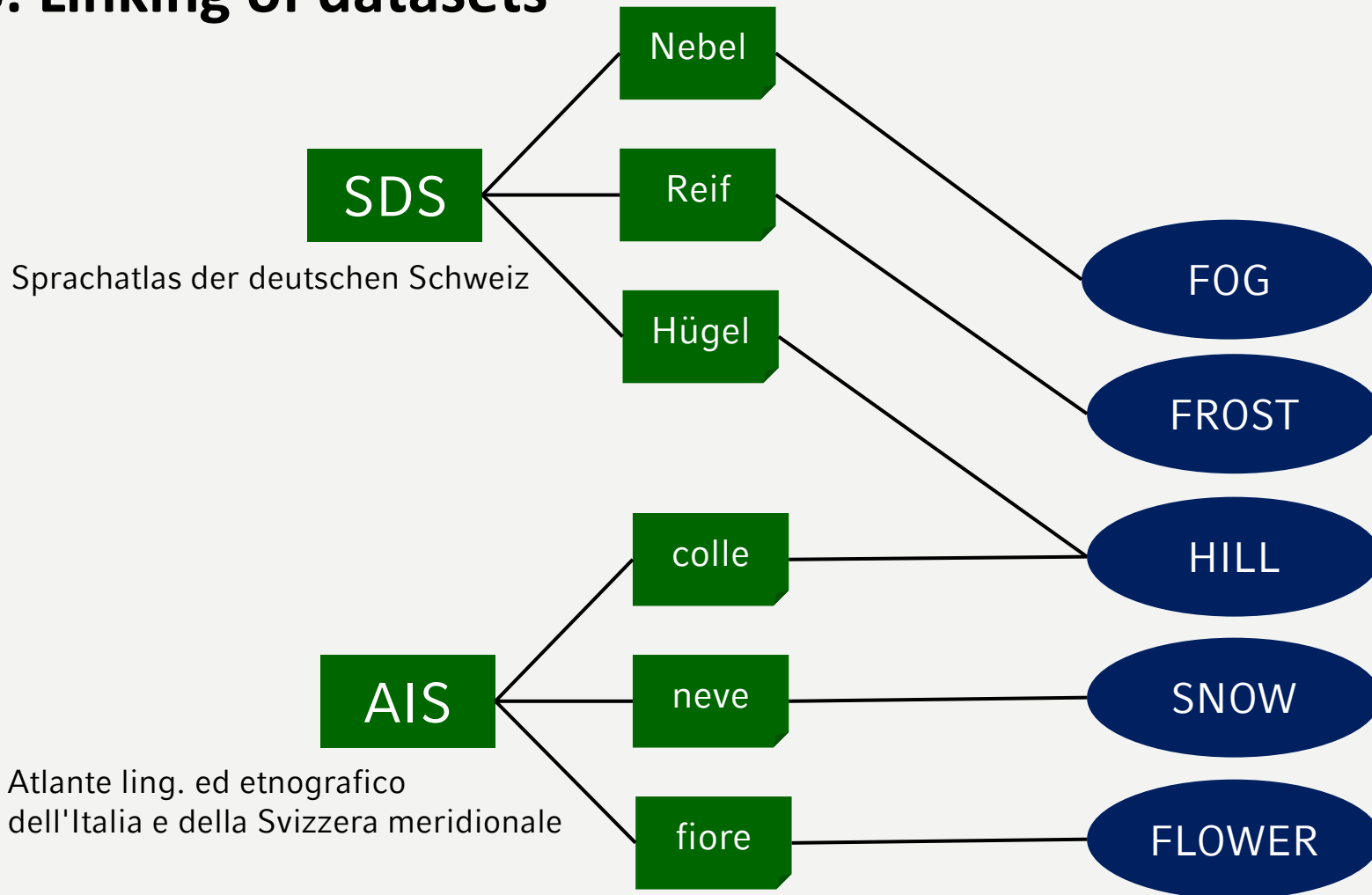


## 5. Linking of datasets



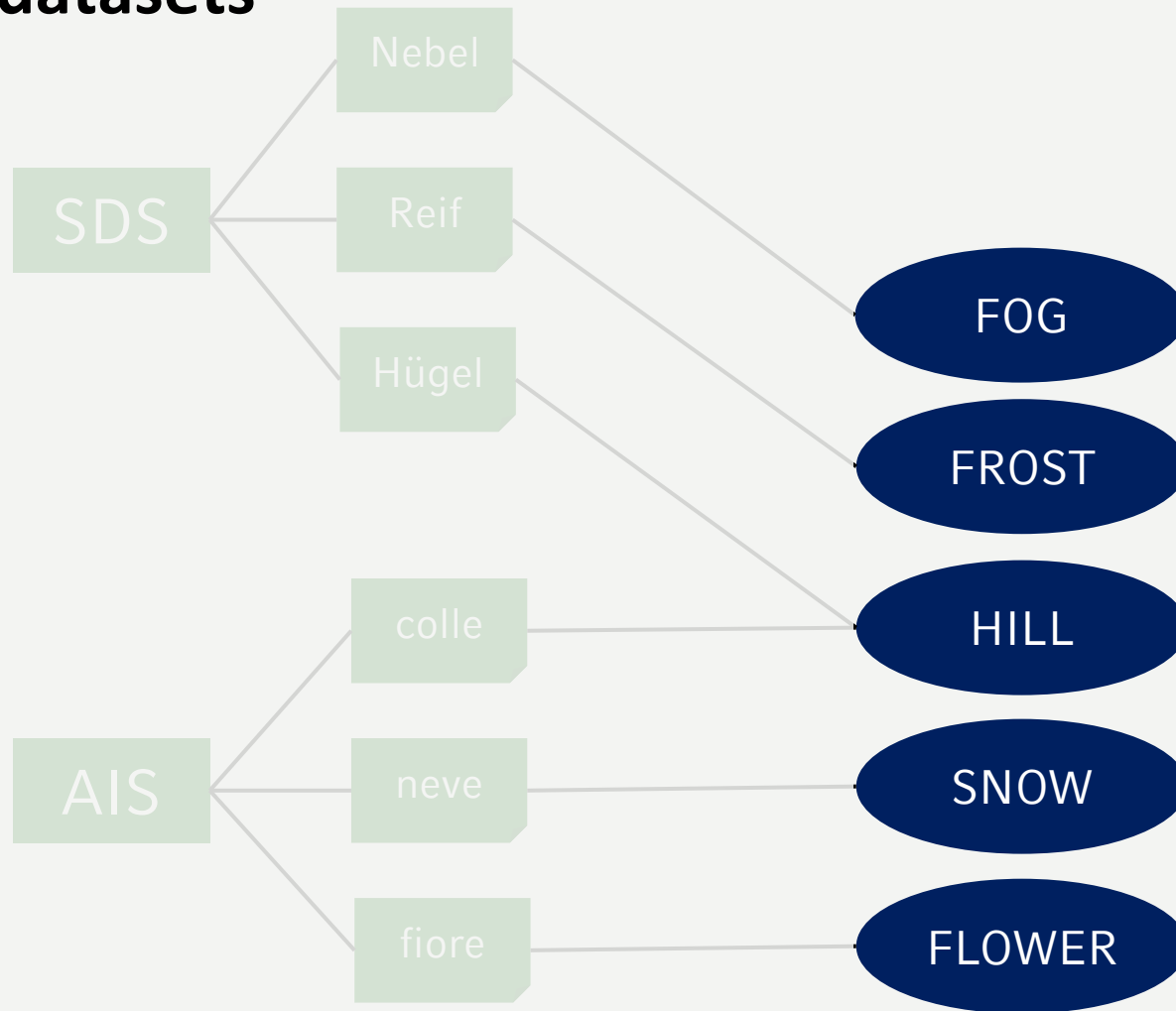


## 5. Linking of datasets





## 5. Linking of datasets



## 5. Linking of datasets

- Global identifier for names, institutions and topical terms
- GND: *Gemeinsame Normdatei* (integrated authority file by the German National Library)
- QID: identifier created by the Wikidata knowledge base

4135744-9 (GND)

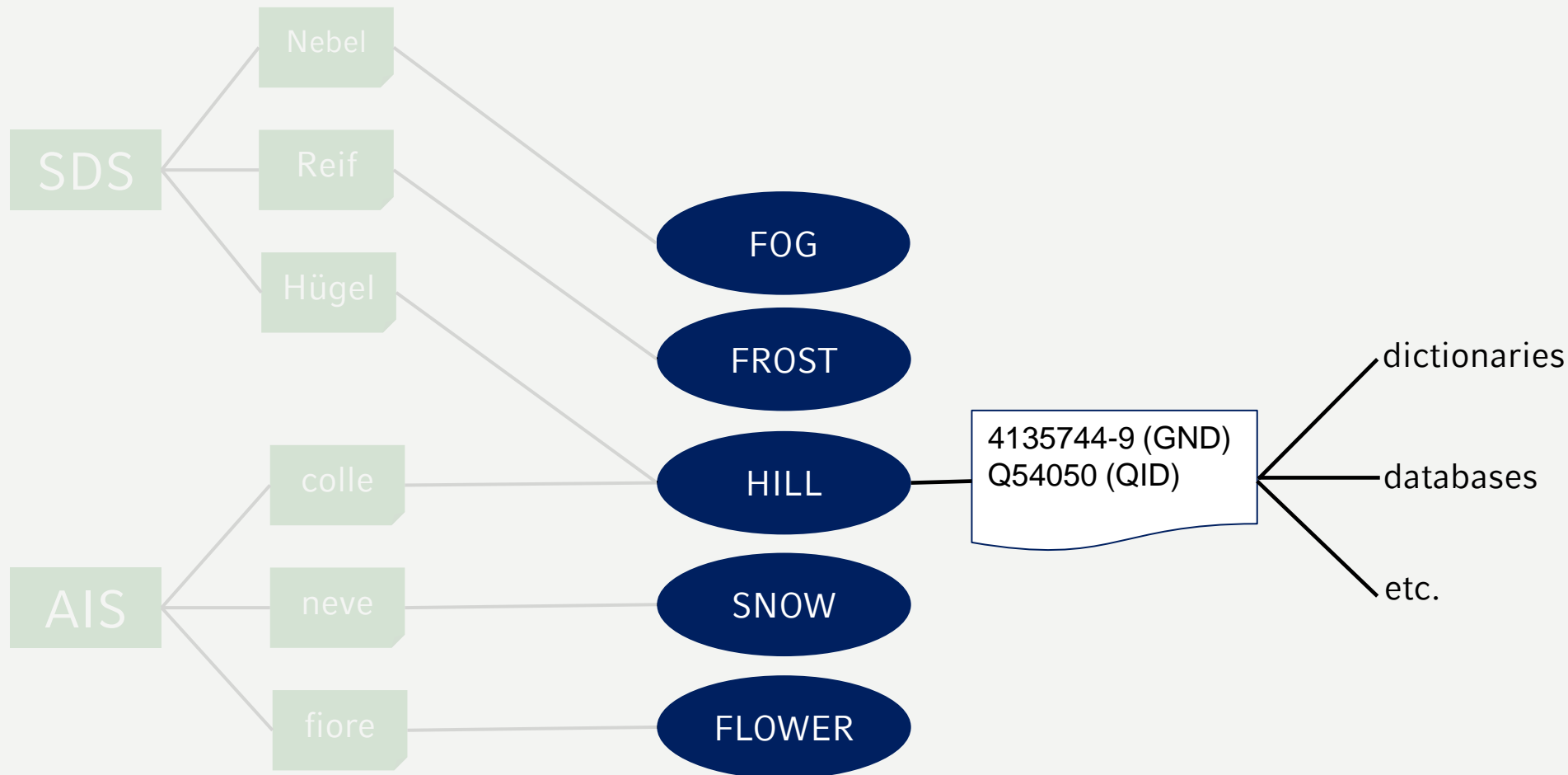
Q54050 (QID)

...



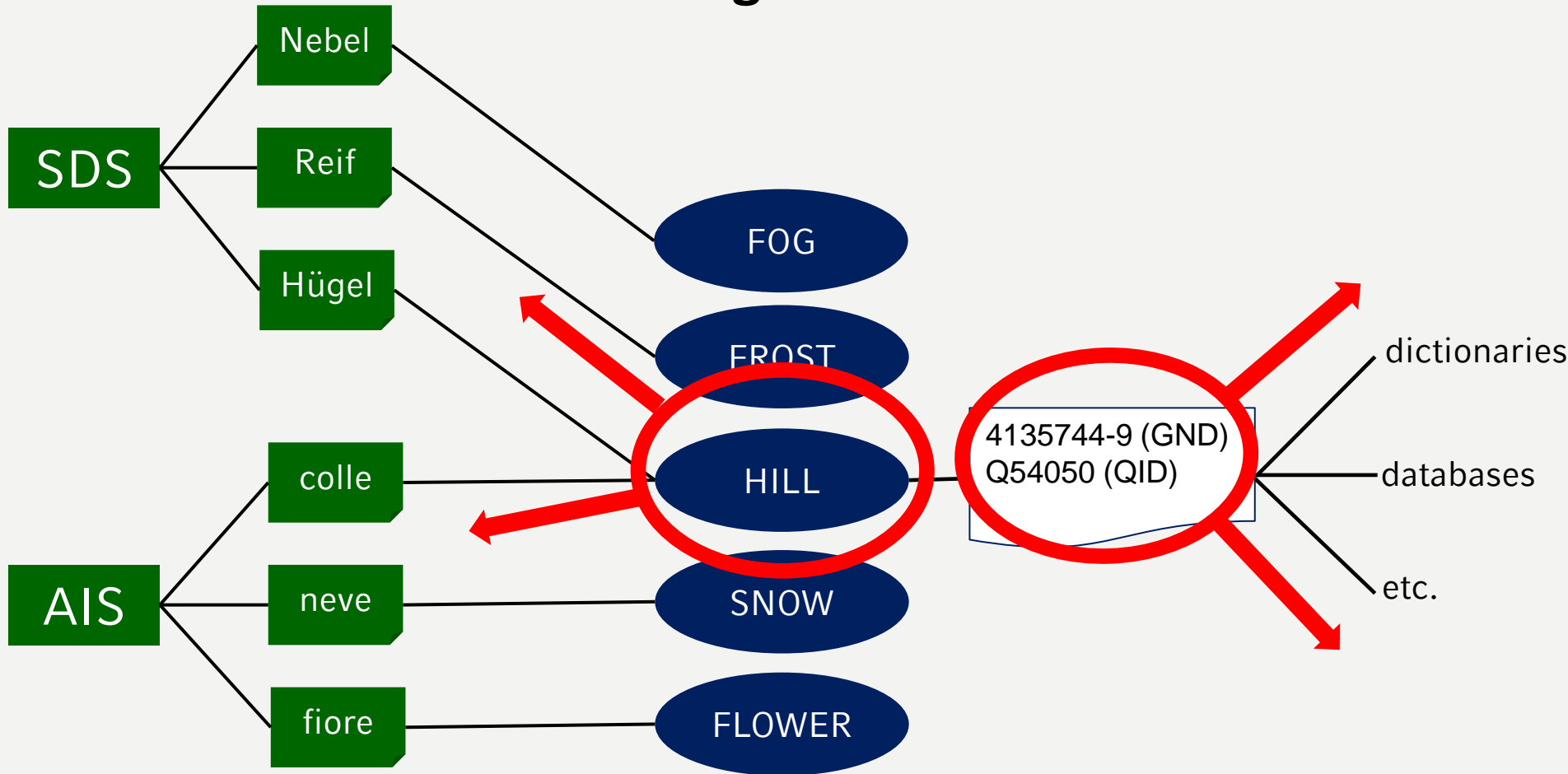


## 5. Linking of datasets





## 5. Linking of datasets





# Thanks for your attention!

