NOTES on vegetation - TrophCost

💡 Removed observations:

- Plants from the BEs matrix that were not identified up to genus level were removed (i.e. those only until family level):
  - Brassicaceae_sp, Asteraceae_sp, Caryophyllaceae_sp, Orchidaceae_sp
- “Baumkeimling_sp” observation
- “Unknown” observation
- Tree species:
  - Acer_sp
  - Betula_pendula (Hänge-Birke)
  - Carpinus_betulus (Heinbuche)
  - Fraxinus_excelsior (Gewöhnliche Esche)
  - Pinus_sylvestris (Wald-Kiefer, Föhre, Forle)
  - Populus_tremula (Zitter-Pappel, Espe)
  - Prunus_avium (Süßkirsche)
  - Prunus_sp
  - Prunus_spinosa (Schlehdorn)
  - Quercus_robur (Stiel-Eiche)
  - Tilia_sp (Linden)
- Shrubs species:
  - Juniperus_communis (Gewöhnlicher Wacholder)
  - Crataegus_sp (Weißdorne)
- Fern species:
  - Ophioglossum_vulgatum (Gewöhnliche Natternzunge)

Medicago × varia (Bastard-Luzerne) is a hybrid between the two sister species Medicago sativa (DE=Luzerne, EN=Alfalfa) and Medicago falcata (DE=Sichelklee, EN=sickle clover). Additionally, M. falcata is very rare in BB, especially in the Oder region (Odergebiet); mostly M. falcata x M. sativa (Richert & Brauner, 2018). Moreover, Medicago x varia is synonym of:

- Medicago sativa subsp. hemicycla (Grossh.) C.R.Gunn
- Medicago sativa var. pauciflora (Ledeb.) Urb.
- Medicago sativa subsp. varia (Martyn) Arcang.
- Medicago sativa var. varia (Martyn) Urb.)

Therefore, for practical purpose, Medicago x varia was consider synonym of Medicago sativa aggr.
Only in BW (Ebert et al. 2005) both plants were listed.
Whenever an interaction was repeated between Medicago x varia and Medicago sativa aggr., the highest interaction strength was consider.
In BB (Richert & Brauner 2018) only Medicago x varia was listed.

if Potentilla tabernaemontani = P. verna (http://powo.science.kew.org)
and P. neumanniana = P. tabernaemontani = Frühlings Fingerkraut (Ebert 2005, BW)
and P. neumanniana = Frühlings Fingerkraut (Richert & Brauner 2018)
then P. neumanniana = P. verna = Frühlings Fingerkraut (https://www.floraweb.de/xsql/artenhome.xsql?suchnr=20053&)

💡 Valeriana officinalis includes all following subspecies and aggregations that appear in both books. ***Whenever an interaction was repeated between any of the plants, the highest interaction strength was consider.

- (Ebert 2005, BW):
  - Valeriana officinalis ssp. officinalis (Echter Arznei-Baldrian)
  - Valeriana officinalis ssp. excelsa (Syn. = Valeriana procurrens; Kriechender Arznei-Baldrian)
  - Valeriana officinalis ssp. tenuifolia (Syn. = Valeriana wallrothi, Valeriana pratensis; Schmalblättriger Arznei-Baldrian)
  - Valeriana officinalis agg. (Arznei-Baldrian)
- And (Richert & Brauner 2018, BB):
  - Valeriana officinalis s.l. (Arznei-Baldrian)

💡 Vicia sativa aggr. included all subspecies of V. sativa i.e:
- Vicia sativa (Futter-Wicke, Saat-Wicke)
- Vicia sativa ssp. nigra = Vicia angustifolia (Schmalblättrige Wicke; Richert & Brauner 2018, BB)

- Whenever a species interaction was repeated between any of the plants subspecies, the highest interaction strength was consider.
- For red list data, whenever two or more subsp. of a plant where present, the worst i.e. most endangered score was considered and a note was added to comment column.
- Taraxacum officinale auct. = Taraxacum sect. Ruderalia in Richert & Brauner ⇒ should we consider it as Taraxacum sp. ??????????? ⇒ ask Klaus! ☑ TODO

Conflicting cases in Richert und Brauner: does not have * to ***, they are missing, e.g:

- Echinops banaticus in Maniola jurtina
- Vicia spec. in Polyommatus coridon

>>> Consider them as 0.2 (*)

To check manually the species which are only identified up to family level do the following:
1) in the file interactions_unmatched.csv
- add filters to every column
- highlight in red all genes in the plant_genus column that are identified until family levels in the BE's list
- highlight in red all species in the plant_species column which are spec. or sp.
2) in the file trophic-link-matrix
- for each butterfly species, search and check each red column.
- fill in with 0.1s

1	butterfly_species	plant_genus	plant_species	plant_butterfly_interaction_strength
2180	Vanessa cardui	Ligustrum	vulgare	0.2
2181	Vanessa cardui	Lotus	pedunculatus	0.2
2182	Vanessa cardui	Lychnis	flos-cuculi	0.2
2183	Vanessa cardui	Lythrum	salicaria	0.6
2184	Vanessa cardui	Matricaria	spec.	0.2
2185	Vanessa cardui	Medicago	x varia	0.2
2186	Vanessa cardui	Mentha	aquatica	0.2
2187	Vanessa cardui	Mentha	x piperita	0.2