2BXYZ1OooO1FffF Genus species GggSs.jpg*, a proposal for a name-giving for nature-pictures with EPPO codes (https://gd.eppo.int)

*where 2BXYZ=Prefix, 1OooO1FffF & GggSs=EPPO codes

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2BXYZ = prefix, 1OooO = Order, 1FffF = family, GggSs = EPPO code of scientific name "Genus species"

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Ⴤ Introduction

Ⴤ "Nature-amateurs" take thousands of pictures every year and store them....

⋏ ... in a multitude of directories in their computer.
E.g. : "Garden", "walks", "holidays", "animals", "plants", "nature training"...

⋏ ... with a lot of different names.
E.g. for Sinapis arvensis :
"Sinapis", "wild mustard", "Kedlock", "Kelk", "Charlock", "Sené", "Sanve" etc.

Ⴤ They look for a method to recover easily nature-pictures stored in their computer or even on Internet.

Ⴤ How to do to store & search a picture of a specific species ?

This is what we propose to develop in this presentation.

2BXYZ = prefix, 1OooO = Order, 1FffF = family, GggSs = EPPO code of scientific name "Genus species"

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1. Introduction

2. Principle for a name-giving of nature-pictures = "Prefix + EPPO codes"

3. Aim of this paper : "Proposal of such prefixes"

4. Utility for a quick search of pictures

ΥΛ Principle of naming of nature-pictures

Υ 1) The aim = Constantly use of <u>a same name</u> for a defined species.

General formula (see "Title") : 2BXYZ1OooO1FffF Genus species GggSs.jpg
where "2BXYZ"= prefix, "1OooO1FffF"=Order & Family,
"Genus species" =Latin name,"GggSs"=EPPO code, "jpg"=File extension

<u>Optionaly</u> :
2BXYZ1OooO1FffF Genus species, Français, English... GggSs Date Place.jpg

Υ 2) No spaces between "prefix&taxons" = 2BXYZ1OooO1FffF

Υ 3) <u>First</u> character of prefix= "2"

Λ inspired by EPPO that uses "1" before each taxon

Λ avoids confusions with similar words

2BXYZ = prefix, 1OooO = Order, 1FffF = family, GggSs = EPPO code of scientific name "Genus species"

Ⅴ 4) <u>Second</u> character of prefix = "ABCD". "A"(=abiotic) or "B"(=biotic) or
"C"(=cultural) or "D"(=durabilité (French) = sustainability (English))...
In this paper, we're only interested in Biotic = "B".

Ⅴ 5) Limitation (if possible) of maximum 2 EPPO codes in a name-giving.

Ⅴ 6) Next characters of prefix = a shortcut of taxons above the ranks of
1FffF (Family)   [or 1OooO1FffF (Order Family)]
E.g. for Sinapis arvensis (https://gd.eppo.int) :

- Taxons above the rank "Family" are : 1PlaK1MagP1AngC1MavD1CapO
Such a "shortcut" is unrealistic and has to be furthermore shortened

- This (to long) prefix becomes 2BPDH (see further).

- A picture with "Sinapis arvensis" becomes : 2BPDH1CruF Sinapis arvenis SinAr.jpg
where 2BPDH=prefix, 1CruF=Family, SinAr=EPPO code, jpg = file extension.

2BXYZ = prefix, 1OooO = Order, 1FffF = family, GggSs = EPPO code of scientific name "Genus species"

Y **7) For unusual pictures (at least for Nature-amateurs...),**
taxons above the rank of genus are maintained. E.g. Protozoa = 2B1ProtK.

Y **8) Latin name "Genus species" (not constant)**
follows 2BXYZ1FffF and precedes GggSs (constant)

Y **9) Use of uppercase and lowercases**
(at least in this paper to "highlight" the taxons).

  ▪ E.g. CheAl i/o CHEAL (Chenopodium album),
  ColeO i/o 1COLEO Coleoptera (Order),
  1AnimK i/o 1ANIMK Animalia (Kingdom)...

2BXYZ = prefix, 1OooO = Order, 1FffF = family, GggSs = EPPO code of scientific name "Genus species"

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YΛ For NOT IMPORTANT Kingdoms, Phylums, Classes...

(at least for nature-amateurs...) the
normal EPPO code follows "2B"

Y 2B1ArcaK = Archaea

Y 2B1ChroK = Chromista

Λ 2B1ChroK1OomyC
           = Oomycetes

Y 2B1ProtK = Protozoa

Λ 2B1ProtK1MyxoP
           = Myxomycota
           = BLOB

Y 2B1ViruK = Virus & Viruoides

YΛ IMPORTANT 1KkkK, 1PppP...
for nature-amateurs (see next slides)

1KkkK Kingdom, 1PppP Phylum, 1CccC Classe...

1ChroK:Chromista (Règne)
1PsdfP:Pseudofungi (Embranchement)
1OomyC:Oomyceta (Classe)
1PeroO:Peronosporales (Ordre)
1PeroF:Peronosporaceae (Famille)
1PhytG:Phytophthora (Genre)
PhytIn:Ph.infestans (Espèce)
= mildiou de la pomme de terre
NB : K=Kingdom, P=Phyllum

2B1ChroK1OomyC Phytophthora infestans PhytIn.jpg

2B1ProtK1MyxoP 150606.jpg

Y̷Λ Animalia 1AnimK : Prefix starts with "2BA"

Y̷ **2BAI** = Invertebrata (see further)

Y̷ **2BAV** = Chordata Vertebrata 1ChorP1VertQ (see next slide)

Λ **2BAVM** = Mammalia 1MammC

Λ **2BAVO** = Aves (birds) 1AvesC ("O" i/o "A" like "Orntithology", to avoid confusion with Amphibia

Λ **2BAVP** = Actinopterygii 1ActnC (like Pisces (fishes))

Λ **2BAVA** = Amphibia 1AmphC

Λ **2BAVR** = Reptilia 1ReptC

⅄ 2BAV Vertebrata : Mammals & Ornitho (birds) = 2BAV-1OoooO1FfffF

2BAVM1ErinO1ErinF Erinaceus europaeus, Hérisson, hedgehog **ErnaEu**.jpg

2BAVO1AnseO1AnaxF Aythya fuligula, Fuligule morillon, Tufted duck **AythFu**.jpg

2BA = Animals, 2BAVM = Mammals, 2BAVO = Ornitho (Birds)

V1OoooO = Order, 1FfffF = Family

1ErinO = Erinaceomorpha, 1ErinF = Erinaceidae

1AnseO = Anseriformes, 1AnaxF = Anatidae

Y **2BAV** Vertebrata : Amphibia, Pisces & Reptilia = 2BAV-1FfffF

2BAVP1CypnF Cyprinus carpio, Carpe, Carp
CypnCa.jpg

2BAVA1RansF Rana temporaria, Grenouille
rousse, Common frog RansTe.jpg

2BAVR1AngiF Anguis fragilis,
Orvet, Blind worm AngsFr.jpg

2BA = Animals, 2BAVP = Pisces, 2BAVA = Amphibia,
2BAVR = Reptilia

1CypnF = Cyprinidae

1RansF = Ranidae

1AngiF = Anguidae

Y **2BAIA** = Animalia **Invertebrata Arthropoda** 1AnimK1ArthP

Unusual pictures for Nature-amateurs

Λ **2BAIA**1CrusQ = Crustaceae

Λ **2BAIA**1MyriQ = Myriapoda

Other Arthropoda
(usual pictures for Nature-amateurs)

Λ **2BAIAC** = 1CheIQ Chelicerata

• **2BAIACA** = 1AracC Arachnida

Λ **2BAIAH** = 1HexaQ Hexapoda

• **2BAIAH**1EntgC = Enthognathes

• **2BAIAHI** = 1InseC Insecta

(See next slide)

2BAIACA1AranO1AgelF Agelena labyrinthica AgleLa.JPG

- 2BAIAHI = 1InseC Insecta

Usual pictures for Nature-amateurs

- 2BAIAHIC = 1ColeO Coleoptera
- 2BAIAHID = 1DiptO Diptera
- 2BAIAHIH = 1HemiO Hemiptera
- 2BAIAHIL = 1LepiO Lepidoptera
- 2BAIAHIO = 1OdonO Odonata

Less important Orders for Nature-amateurs

- 2BAIAHI1DrmpO = Dermoptera
- 2BAIAHI1EphmO = Ephemeroptera
- 2BAIAHI1HymeO = Hymenoptera
- 2BAIAHI1MecoO = Mecoptera
- 2BAIAHI1OrthO = Orthoptera
- 2BAIAHI1TrcpO = Trichoptera
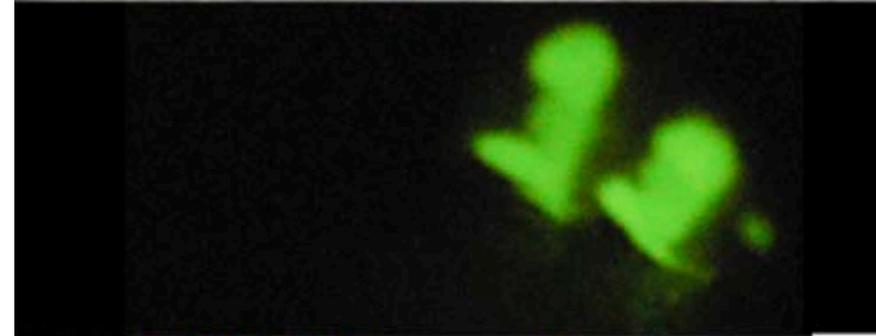
2BAIAHIC1LampF Lampyris noctiluca, Ver luisant, Glow-worm LampNo.jpg

1LampF=Lampyridae

Y\ Plantae1PlaK : Prefix starts with "2BP"

Y 2BPA = Alguae (not an EPPO code (to complete))

Y 2BPB = 1BryP Bryophyta

- 2BPB1BryC	= Bryopsida
- 2BPB1GikP	= Ginkgophyta
- 2BPB1JngC	= Pellia
- 2BPB1MhtC	= Marchantia
- 2BPB1PoyC	= Acrocarpes
- 2BPB1ShgC	= Sphagnopsida

Y 2BPG = Gymnospermae
= 1PinP1PinC1ConO Pinophyta Pinopsida Pinales

- 2BPG1PinF	Pinaceae
- 2BPG1CupF	Cupressaceae etc.

Y 2BPP= 1PteP Pteridophyta

- 2BPPE1PteP	= Equisetopsida
- 2BPPP1PteC	= Pteridopsida

## Y 2BP--- = 1MagP1AngC Magnoliophyta Angiospermae (See next slide)

2BPB1ShgC1ShgF Sphagnum, Sphaigne, Bog-mos Shg--.jpg

Y 2BP--- Magnoliophyta Angiospermae 1MagP1AngC

Class of Angiospermae is divided in 12 categories (APG IV)

Λ First group = Monoaperturate Pollen (4 categories)

- Basal angiosperms 1BasD & Magnoliids 1MagD

- Basal monocotyledons 1MonD & Commelinids 1ComD
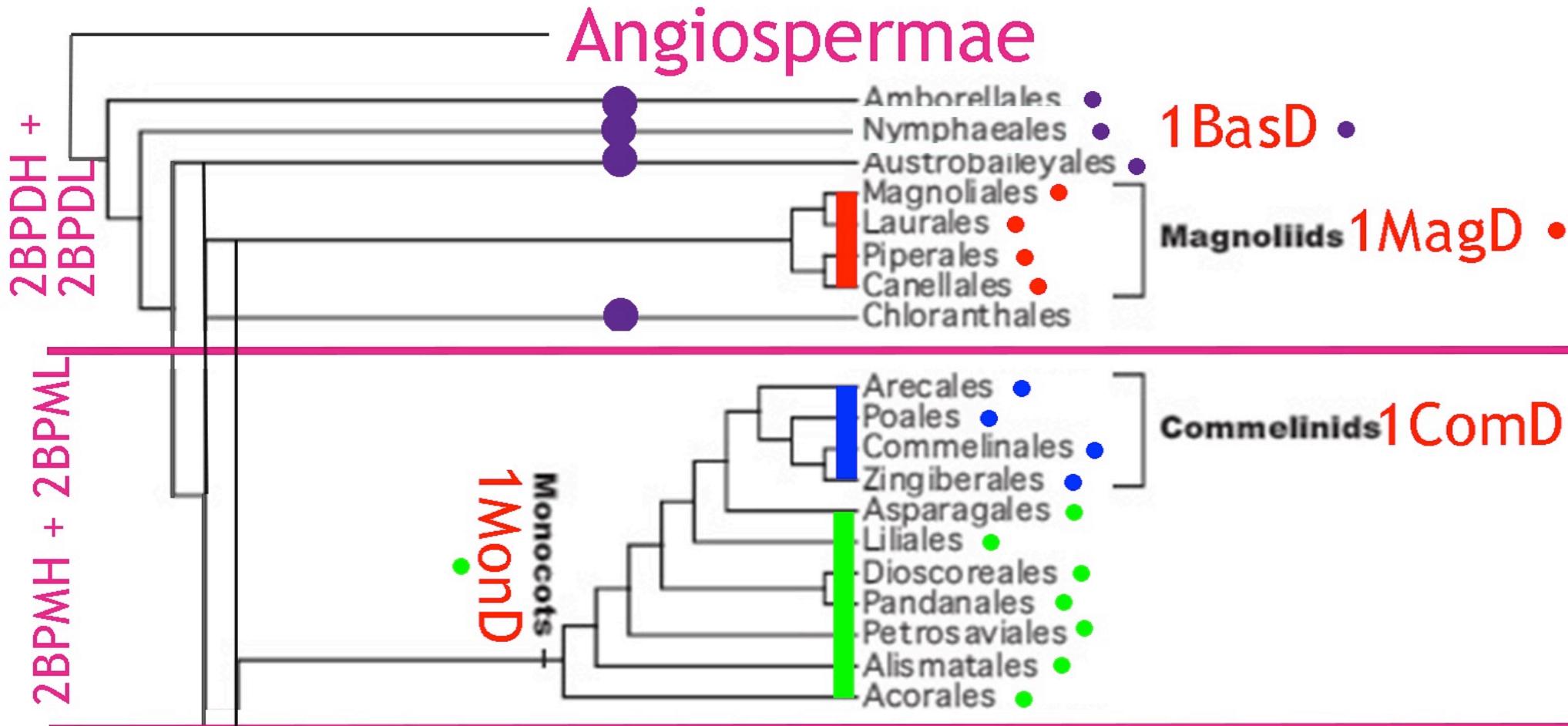
3. Aim of this paper:
"Proposal
of such **prefixes**"
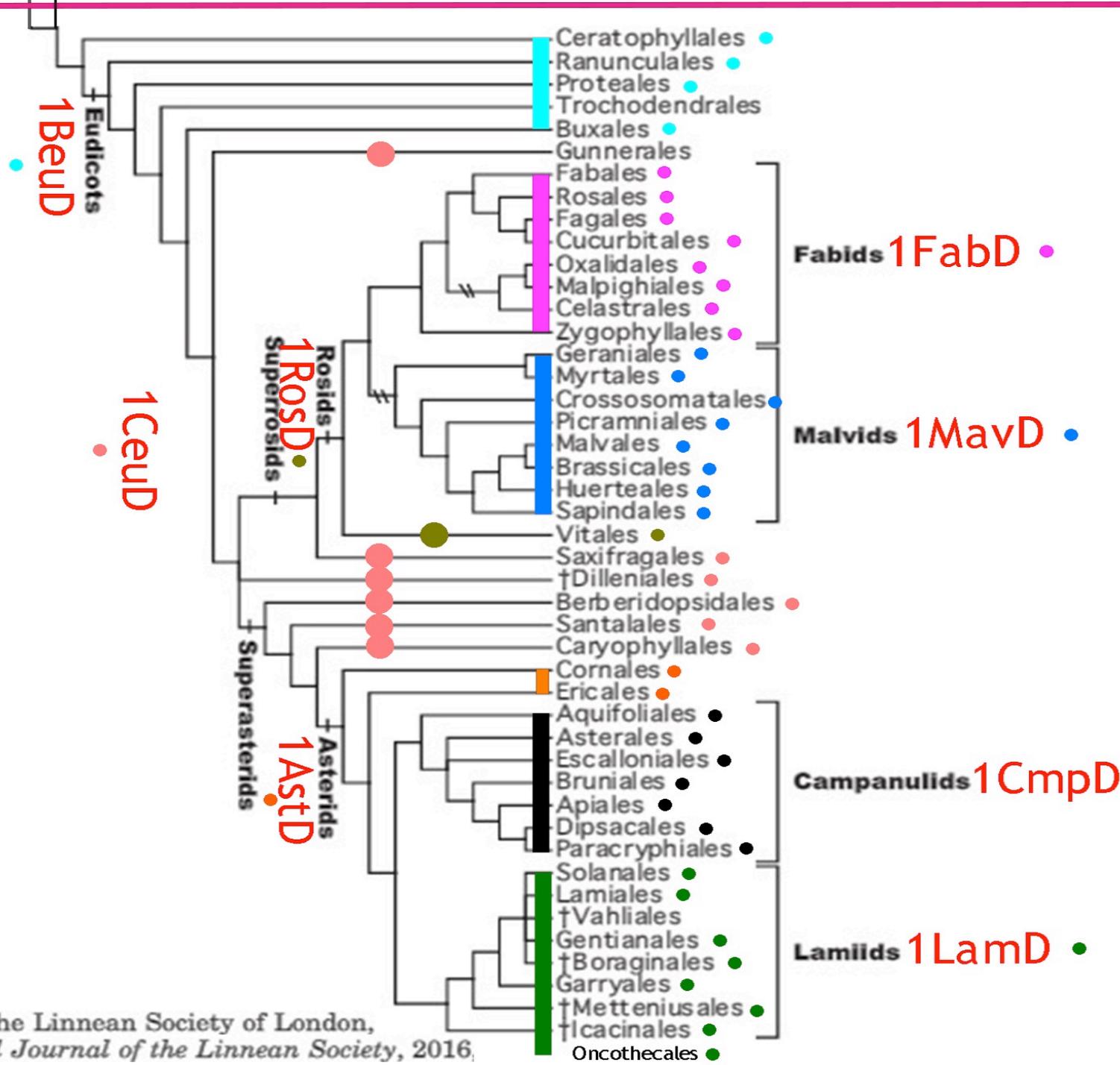
ᴧ Second
group =
Triaperturate
Pollen
(8 categories)

- Basal eudicots
  1BeuD
- Basal core eudicots
  1CeuD
- Basal rosids
  1RosD
- Fabids
  1FabD
- Malvids
  1MavD
- Basal asterids
  1AstD
- Campanulids
  1CmpD
- Commelinids
  1ComD

1BeuD

2BPDH + 2BPDL

1CeuD

Eudicots

Superrosids
Rosids
1RosD

Superasterids

Asterids
1AstD

Ceratophyllales
Ranunculales
Proteales
Trochodendrales
Buxales
Gunnerales
Fabales
Rosales
Fagales
Cucurbitales
Oxalidales
Malpighiales
Celastrales
Zygophyllales

Fabids 1FabD

Geraniales
Myrtales
Crossosomatales
Picramniales
Malvales
Brassicales
Huerteales
Sapindales

Malvids 1MavD

Vitales
Saxifragales
†Dilleniales
Berberidopsidales
Santalales
Caryophyllales
Cornales
Ericales
Aquifoliales
Asterales
Escalloniales
Bruniales
Apiales
Dipsacales
Paracryphiales

Campanulids 1CmpD

Solanales
Lamiales
†Vahliales
Gentianales
†Boraginales
Garryales
†Metteniusales
†Icacinales
Oncothecales

Lamiids 1LamD

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*Botanical Journal of the Linnean Society, 2016,*

Y **2BP---** Magnoliophyta Angiospermae 1MagP1AngC

The class of Angiospermae is divided into Monocotyledonae & Dicotyledonae
And each of those is classifiable into herbaceaous & ligneous*

Y Proposed **prefixes** for Angiospermae

Λ **2BPD** = Dicotyledonae

▪ **2BPDH** = D. Herbaceae

▪ **2BPDL** = D. Lignosae

Λ **2BPM** = Monocotyledonae

▪ **2BPMH** = M. Herbaceae

▪ **2BPML** = M. Lignosae
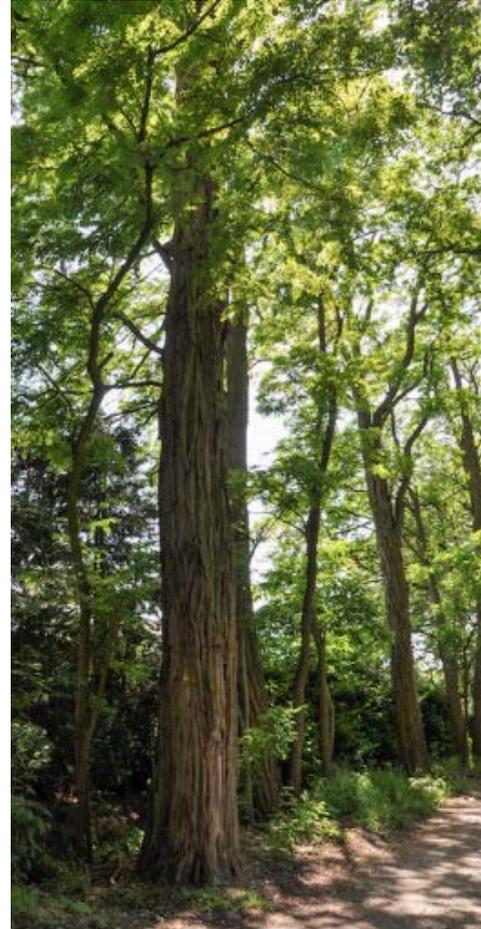
2BPDH1LegF Vicia sativa,
Vesce commune, Common
Vetch VicSa.jpg

2BPDL1LegF Robinia
pseudoacacia, Robinier
faux-acacia , False acacia RobPs.jpg

* Flore Forestière Française

1LegF=Fabaceae

Y⅄ Fungi 1FungK : **Prefix** starts with "**2BF**"

⅄ Unusual groups

⅄ **2BF1ChytP** = Chytridiomycota

⅄ **2BF1ZygoP** = Zygomycota

⅄ Usual groups **Prefix**1OoooO1FfffF

⅄ **2BFA**　　= 1AscoP Ascomycota

▪ **2BFAP**　= 1PeziQ Pezizomycotina

▪ **2BFAS**　= 1SaccQ Saccharomycotina

▪ **2BFAT**　= 1TaphQ Taphrinomycotina

⅄ **2BFB**　　= 1BasiP Basidiomycota

▪ **2BFBA**　= 1BasiC Agaricomycotina

▪ **2BFBP**　= 1TeliC Pucciniomycotina

▪ **2BFBU**　= 1UstoC Ustilagomycotina

2BFAP1HyprO1NecctF Cylindrocladium buxicola, Dépérissement du buis, Box blight CyldBu.JPG

2BFBA1AgarO1MyceF Mycena pterigena, Mycène rosâtre, Ferny bonnet MycePt.jpg

Ψ⋏ Lichens (also 1FungK) : Prefix starts with "2BFL"

Y **2BFLCo** = L. complexe

Y **2BFLCr** = L. crustacé

Y **2BFLFc** = L. folicole

Y **2BFLFl** = L. foliacé

Y **2BFLFr** = L. fruticuleux

Y **2BFLLe** = L. lépreux

Y **2BFLSq** = L. squameux

(apart from the first letters of the prefix, same way as for 2BF) : E.g. A=Ascomycota, B=Basidiomycota...

2BFLFcA1TelsO11TelsF Xanthoria parietina
XnthPa 170709.JPG

Ɏ⅄ Table of contents of this presentation

Y⅄1.Quick search of a precise species using its scientific name or EPPO code

Ⅴ E.g. Necrophorus vespilio OR NecoVe

NecoVe = EPPO code of Necrophorus vespilio

1OrthO

Rechercher : Ce Mac « Biotica »   Enregistrer

2BAIAHI1OrthO1TettF Pholidoptera griseoaptera, Decticelle cendrée PhdpGr 150729.1.JPG

Images

2BAIAHI1OrthO1TettF Pholidoptera griseoaptera, Decticelle cendrée PhdpGr 150729.1.JPG

2BAIAHI1OrthO1TettF Pholidoptera griseoaptera, Decticelle cendrée PhdpGr 150729.2.JPG

2BAIAHI1OrthO1TettF Pholidoptera griseoaptera, Decticelle cendrée PhdpGr 150729.2.JPG

2BAIAHI1OrthO1TettF Pholidoptera griseoaptera, Decticelle cendrée PhdpGr 150729.3.JPG

2BAIAHI1OrthO1TettF Tettigonia cantans, Sauterelle cymballière TttaCa 150705.1.JPG

2BAIAHI1OrthO1TettF Tettigonia cantans, Sauterelle cymballière TttaCa 150705.2.JPG

ϒλ 2.Quick search of families (and species) belonging to an Order, using an EPPO code or a prefix 2BXYZ.

ϒ E.g. : 1OrthO or 2BAIAHI1OrthO to find the families and species belonging to the Order of Orthoptera.

2B=first characters of a prefix.

AIAHI = Animal Invertebrates Arthropoda Hexapoda Insecta
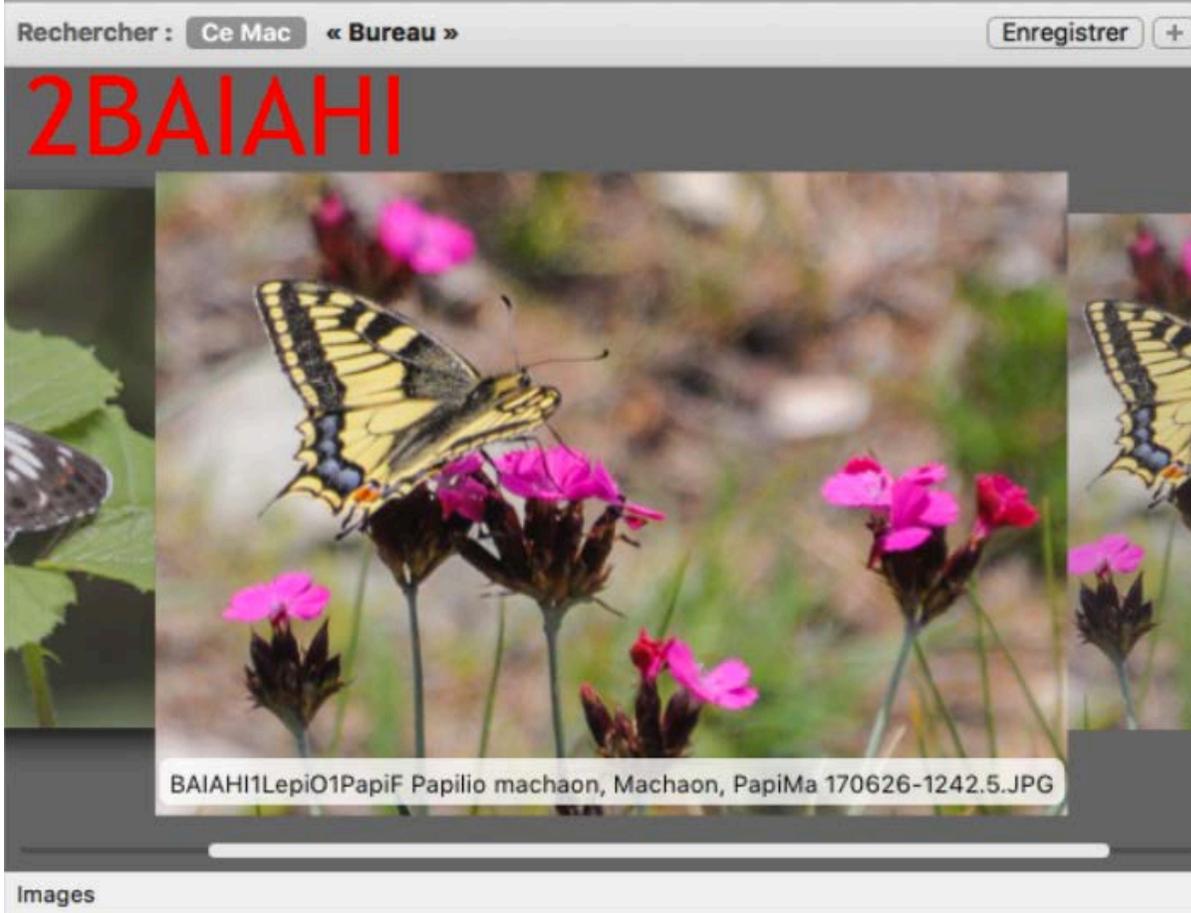
ΥΛ 3.Quick search of taxons (and species) belonging to an Class, using a prefix 2BXYZ.

Υ E.g. : 2BAIAHI to find all the taxons and species belonging to the Class of Insecta.

2B=first characters of a prefix.

AIAHI = Animal Invertebrates Arthropoda Hexapoda Insecta
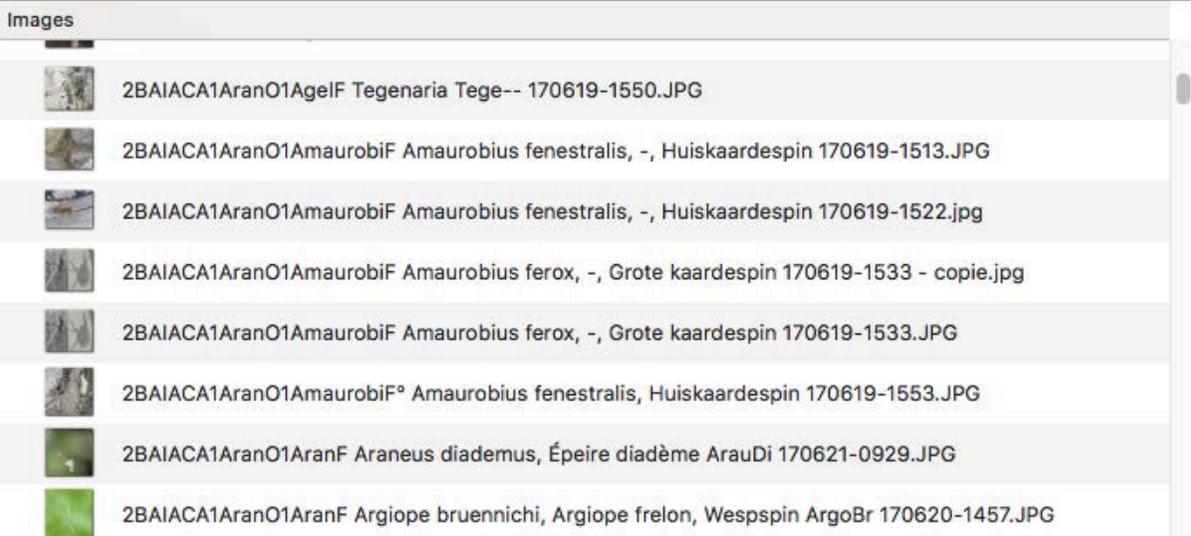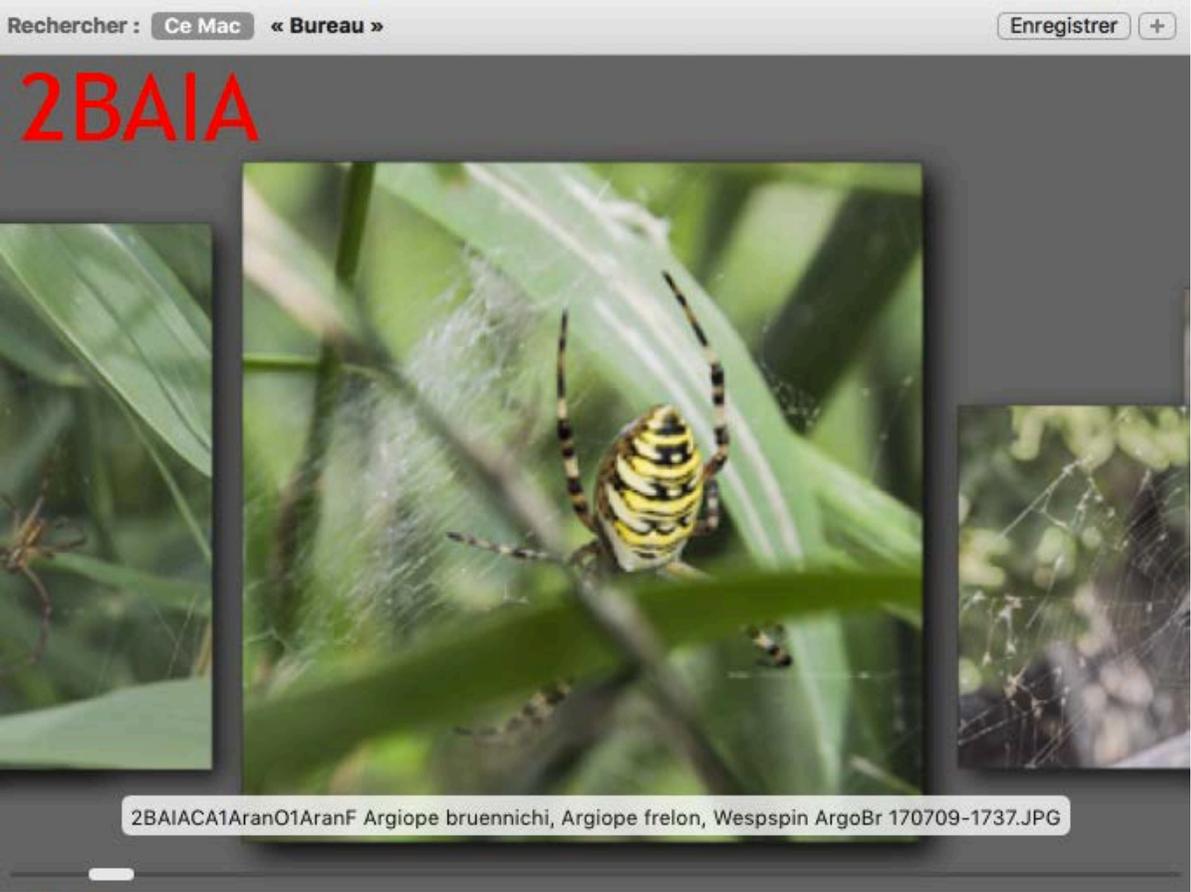
YΛ 4.Quick search of taxons (and species) belonging to a Phylum, using a prefix 2BXYZ.

Y E.g. : 2BAIA to find all the taxons and species belonging to the Phylum of Arthropoda.

Rechercher : Ce Mac « Bureau » Enregistrer +

2BAIA

2BAIACA1AranO1AranF Argiope bruennichi, Argiope frelon, Wespspin ArgoBr 170709-1737.JPG

Images

2BAIACA1AranO1AgelF Tegenaria Tege-- 170619-1550.JPG

2BAIACA1AranO1AmaurobiF Amaurobius fenestralis, -, Huiskaardespin 170619-1513.JPG

2BAIACA1AranO1AmaurobiF Amaurobius fenestralis, -, Huiskaardespin 170619-1522.jpg

2BAIACA1AranO1AmaurobiF Amaurobius ferox, -, Grote kaardespin 170619-1533 - copie.jpg

2BAIACA1AranO1AmaurobiF Amaurobius ferox, -, Grote kaardespin 170619-1533.JPG

2BAIACA1AranO1AmaurobiF° Amaurobius fenestralis, Huiskaardespin 170619-1553.JPG

2BAIACA1AranO1AranF Araneus diademus, Épeire diadème ArauDi 170621-0929.JPG

2BAIACA1AranO1AranF Argiope bruennichi, Argiope frelon, Wespspin ArgoBr 170620-1457.JPG

2B=first characters of a prefix.

AIA = Animal Invertebrates Arthropoda

YΛ 5.Quick search of taxons (and species) belonging to a taxon (non coded by EPPO), using a prefix 2BXYZ.

Y E.g. : 2BAI to find all the taxons and species belonging to the Invertebrata.

2B=first characters of a prefix.

AI = Animal Invertebrates

YΛ 6.Quick search of taxons (and species) belonging to a Kingdom, using a prefix 2BXYZ.

Y E.g. : 2BA to find all the taxons and species belonging to the Animalia.

2B=first characters of a prefix.

A = Animalia

YA 7.Quick search of taxons (and species) belonging to the "living world" = prefix 2B

B=Biotic
A=Abiotic

2B=prefix of "living world"

⅄Λ Keep up of a (sharable...) Excel file with photographed species

D	E	F	H	I
			'	—
2BPDL1CrlF				Corylaceae
2BPDL1CrlF Corylus avellana	CylAv	Noisetier (= Coudrier)		
2BPDL1EbeF				Ebenaceae
2BPDL1EbeF Diospyros kaki	DosKa	Plaquemenier		
2BPDL1ElaF				Elaeagnaceae
2BPDL1ElaF Hippophae rhamnoides	HioRh	Argousier		
2BPDL1EriF				Ericaceae
2BPDL1EriF Arctostaphylos alpinus	AryAl	Raisin d'ours des Alpes		
2BPDL1EriF Arctostaphylos uva-ursi	AryUu	Raisin d'ours		
2BPDL1EriF Calluna vulgaris	CunVu	Bruyère commune		
2BPDL1EriF Erica tetralix	EiaTt	Bruyère des marais (= B. tétragone = B. à quatreangles = B. quaternée)		
2BPDL1EriF Rhododendron ferrugineum	RhoFe	Rhododendron ferrugineux		
2BPDL1EriF Rhododendron ponticum	RhoPo	Rhodondendron pontique (= R. d'Asie mineure)		
2BPDL1EriF Vaccinium myrtillus	VacMy	Myrtille		
2BPDL1EriF Vaccinium vitis-idaea	VacVi	Airelle rouge		
2BPDL1FagF				Fagaceae
2BPDL1FagF Castanea sativa	CsnSa	Châtaignier		
2BPDL1FagF Fagus sylvatica	FauSy	Hêtre commun		
2BPDL1FagF Quercus pubescens	QuePu	Chêne pubescent		
2BPDL1FagF Quercus palustris	QuePa	Chêne des marais		
2BPDL1FagF Quercus petraea	QuePe	Chêne sessile (=Ch. rouvre)		
2BPDL1FagF Quercus robur	QueRo	Chêne pédonculé		
2BPDL1FagF Quercus rubra	QueRu	Chêne rouge d'Amérique		
2BPDL1GenF				Gentianaceae
2BPDL1GenF Gentiana acaulis, Gentiane acaule, Kochs gentiaan GetAc				
2BPDL1GenF Gentiana verna, Gentiane printanière GetVe				
2BPDL1GroF				Grossulariaceae
2BPDL1GroF Ribes nigrum	RibNi	Cassissier (= Groseillier noir)		
2BPDL1GroF Ribes rubrum	RibRu	Groseillier à grappes (=Gr. rouge)		
2BPDL1GroF Ribes sanguineum	RibSa	Groseillier		
2BPDL1GroF Ribes uva-crispa	RibUc	Groseillier à maquereau		
2BPDL1JugF				Juglandaceae

If you've ideas to improve this system of Name-giving for nature-pictures with EPPO codes, thanks to contact us at gelura@proximus.be