Subject Category

From KeyToNature

The metadata field "Subject Category" in the Resource Metadata Exchange Agreement is derived primarily from DublinCore de:subject. The definition is: "A constrained vocabulary of subjects, aiding with search capabilities. For organisms, this may include major taxonomic groups like vertebrates, fungi, etc., but the vocabulary may also include non-taxonomic terms like "ecosystem", "forestry", "aquatic vertebrates". Provider-specific controlled vocabularies may be used which need to be mapped on integration."

The vocabulary is a proprietary vocabulary developed for project purposes.

General subject category terms:

• (so far none, possible values see in definition above)

Taxon terms: This is fixed list of high-level taxonomic or ecological groups like plants, mosses, fungi, algae, etc. intended for general orientation of the user rather than for strict taxonomic classification purposes. This list cannot and does not follow a phylogenetic taxonomy. It includes ecological groups like lichens and paraphyletic groups (those excluding some groups). For all categories, the higher categories should be used only if further information is missing or indeed a mixture or lower categories is present. The terms in brackets are for clarification, and should not be used in data exchange.

"SubjectCategory" should group rare taxa in a way that makes it easy to find commonly searched groups, and still allows to find the rare ones. It should be more an orientation-feature, than ex taxonomy. SubjectCategory is supplemented by "Taxonomic coverage" (Deprecated old name: "Lowest Common Taxon"), allowing expressions on the set of taxa in a collection or image like "SubjectCategory = Insecta" – "Taxonomic coverage = Lepidoptera". (Note: Highest Common Taxa might seem more logical, but would logically be invariably "Biota".)

Note: The following list is probably still too long, but let us start with something too long rather than too short... Only bold-printed terms should be used as values; please observe hyphens where present. Corrections and comments are most welcome!

Vocubulary:

- Viruses
- Prokarovta
 - Archaea (= archaebacteria)
 - Bacteria
- Eukaroyta (all following groups)
 - Fungi-sensu-lato (paraphyletic grouping of taxa considered "fungi" in the classical sense, including Fungi, Oomycota/downy mildews, Myxomycetes)
 - Fungi (here without Oomycota/downy mildews, see Chromista for those)
 - Glomeromycota
 - Zygomycota
 - Chytridiomycota
 - Ascomycota
 - Basidiomycota
 - Deuteromycota (= fungi imperfecti, mitosporic fungi)
 - Lichenes (lichens, mostly ascomycetes in symbiosis with various algal groups)
 - Algae (non-taxonomic term, encompassing parts of Prokaroyta, Protozoa, Chromista, and Plantae)
 - Chromista (= part of "algae")
 - Cryptophyta
 - Haptophyta
 - Labyrinthulomycota
 - Ochrophyta
 - Hyphochytriomycota
 - Oomycota (= traditionally part of fungi)
 - Sagenista
 - Plantae (use this only if a mixture of algae, mosses, etc.!)
 - Plant-fossils (summarize all kinds of extinct groups here)
 - Small-algal-groups (Cyanidiophyta, Glaucophytam, Prasinophyta)
 - Rhodophyta (red algae)
 - Chlorophyta (green algae)
 - Charophyta (green algae, here as paraphyletic group excluding embryophytes)
 - Bacillariophyta (diatoms)
 - Moss-like-plants (= non-vascular land plants traditionally considered "bryophytes")
 - Anthocerotophyta (hornworts)
 - Bryophyta (leafy mosses in the sense of Takakiopsida, Sphagnopsida, Andreaeopsida, Andreaeobryopsida, Polytrichopsida, Bryopsida)
 - Marchantiophyta (= Hepaticophyta, "Hepatophyta", liverworts)
 - Tracheophyta (= vascular plants, "plants" in the common sense)

- Lycopodiophyta (clubmosses)
- Pteridophyta (ferns)
- Equisetophyta (horse tails)
- Seed-plants (spermatophytes)
 - Basal-seed-plants (Cycadophyta/cycads, Ginkgophyta/ginkgo, Gnetophyta)
 - Pinophyta (conifers)
 - Magnoliophyta (flowering plants)

Protozoa

- Acrasiomycota, Apicomplexa, Cercozoa, Choanozoa, Ciliophora, Dictyosteliomycota, Dinophyta, Euglenozoa, Myxomycota, Myzozoa, Plasmodiophoromycota, Sarcomastigophora, Acantharia, Filosia, Granuloreticulosea, Haplosporea, Heliozoa, Labyrinthulea, Lobosa, Sporozoa
- - Invertebrates (any kind of invertebrates as a non-taxonomic grouping; use only if no better category is available)
 - Porifera (sponges: Calcarea, Demospongiae, Hexactinellida)
 - Ctenophora (comb jellies: Nuda, Tentaculata)
 - Cnidaria (stinging animals: Anthozoa (sea anemones and corals), Cubozoa (box jellies), Hydrozoa, Scyphozoa (jellyfish), Staurozoa, Myxozoa)
 - (Superphylum Deuterostomia:)
 - Echinodermata (Ophiuroidea (brittle stars), Crinoidea (feather stars), Holothuroidea (sea cucumbers), Asteroidea (sea stars), Echinoidea (sea urchins), Somasteroidea)
 - Hemichordata (acorn worms: Enteropneusta, Pterobranchia)
 - Invertebrate-chordates (Appendicularia, Ascidiacea, Thaliacea)
 - Vertebrata (vertebrate chordates)
 - Fish (paraphyletic grouping)
 - Other-Fish (= rare fish groups: Cephalaspidomorphi, Cephalochordata/lancetfish), Myxini/hagfish)
 - (Superclass Osteichthyes (bony fish):)
 - Actinopterygii (ray finned fish)
 - Sarcopterygii (lobed finned fish)
 - (Superclass Chondrichtyes (cartaligonous fish))
 - Elasmobranchii (rays and sharks)
 - Holocephali (chimaeras)
 - Amphibia
 - Aves
 - Dinosaurs (special category, only fossil group listed separately!)
 - Reptilia
 - Mammalia

 - (Superphylum Ecdysozoa) ■ Nematoda (= Nemata, nematodes)

 - Tardigrada (water bears)
 - Cephalorhyncha (other worms: Kinorhyncha, Loricifera, Nematomorpha, Priapulida)
 - Arthropoda (arthropods)
 - Arthropod-fossils
 - Crustacea
 - Branchionoda
 - Remipedia
 - Cephalocarida
 - Maxillopoda
 - Ostracoda (seed shrimps)
 - Malacostraca (crabs, lobsters, shrimps)
 - Chelicerata
 - Arachnida (spiders)
 - Merostomata (horseshoe crabs and eurypterids)
 - Pycnogonida (sea spiders, Pantopoda)
 - Myriapoda
 - Chilopoda (centipedes)
 - Diplopoda (millipedes)
 - Pauropoda (rare millipede-like group)
 - Symphyla (garden centipedes)
 - Hexapoda (= insects in a traditional sense)
 - Entognatha (Collembola, Diplura, Protura)
 - Insecta (insects in the strict sense)
 - (Superphylum Platyzoa)
 - Platyhelminthes (flatworms: Cestoda, Trematoda, Turbellaria)
 - Rotifera (rotifers)
 - Rare-Platyzoa (rare marine or parasitic worm groups: Gastrotricha, Acanthocephala, Gnathostomulida, Micrognathozoa, Cycliophora, Mesozoa)
 - (Superphylum Lophotrochozoa)
 - Mollusca (mollusks)
 - Bivalvia (scallops, clams, oysters, mussels, etc.)
 - Cephalopoda (octopuses, squid, cuttlefish, etc.)

- Gastropoda (snails and slugs)
- Polyplacophora (Chitons)
- Scaphopoda (tusk shell)
- Other-Mollusks (small groups like Monoplacophora, Aplacophora)
- Annelida (segmented worms, here only Clitellata, Pogonophora, Polychaeta)
- Rare-Lophotrochozoa (rare groups, usually marine: Echiura (spoon worms, a small group of marine animals), Sipuncula, Nemertea (ribbon worms), Phoronida, Ectoprocta (= Bryozoa, moss animals), Entoprocta, Brachiopoda (lamp shells))

For the user interface of the search tool:

On the user face of the search tool the names should be more readable even for non-scientist users. So for this purpose the vocabulary above will be mapped to names which will appear in the picklist. For the simple query, we will use the following common names (in brackets the corresponding terms of the vocabulary above)

- VIRUSES and BACTERIA (= Viruses, Prokaroyta and below)
- FUNGI (Molds and mushrooms; = Fungi-sensu-lato and below except Lichens)
- LICHENS (= Fungi-sensu-lato and below)
- ALGAE (= Algae, Small-algal-groups, Rhodophyta, Chlorophyta, Charophyta, Bacillariophyta, Chromista)
- MOSSES (= Moss-like-plants and below)
- VASCULAR PLANTS (= Tracheophyta and below)
- PLANT-FOSSILS (Plant-fossils)
- MOLLUSKS (= Mollusca and below)
- CRUSTACEA (= Crustacea and below)
- INSECTS (= **Hexapoda** and below)
- OTHER ARTHROPODS (except Insects and Crustacea) (= Chelicerata and below, Myriapoda and below, Arthropod-fossils)
- FISH (= Fish and below)
- AMPHIBIA (= Amphibia)
- REPTILES (INCLUDING DINOSAURS) (= Dinosaurs, Reptilia)
- BIRDS (= Aves)
- MAMMALS (= Mammalia)
- OTHER ANIMAL GROUPS AND PROTISTA (= Protozoa and below, all groups of Animalia that are not already listed here)

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