

Birth trauma of the binary nomenclature

Alexey Shipunov¹

¹Minot State University, Minot ND, 58707

*In memory
of Andrey Ukrainsky*

Abstract

This short note proposes the possible solution for the long standing, notorious problem of biological nomenclature: instability of binomial names.

1 Introduction

When binary nomenclature (Linnaeus, 1753) was finally accepted by scientific community, it was already known of its imminent problem: when species goes into the new genus, its binomial name changes. Binomial names of species contain the classification component and therefore are not true identifiers.

There were multiple remedies proposed to heal this “birth trauma” of the binary nomenclature and to stabilize more biological names. However, no one is working well. Name changes are still not rare when the research (nowadays, it is typically some molecular phylogeny) splits the old genus or transfer some species to another generic group. Then, many species will change their names. This is typically not welcomed among practitioners, for example, gardeners who want to use proper scientific names of plants.

It is desirable then to find a more universal method which provides stable identifiers for all binomial names in use. This can be hinted from the approach which became popular in palaeontology. Very often, newly discovered fossils described as new species *and* genus. Then, if no second species described (which is mostly so), this new name become the (almost) true identifier.

2 Results

There are several big datasets available which claim to hold all (or at least most) of species names in use. The possible strategy is:

1. Fetch all species names in use from a database(s)
2. Remove from the list those names which are either conserved or are type names of genera
3. Construct unique, human-readable new generic names for each of the remaining species
4. Publish them as a separate publicly available database

Here most important question is probably how to make these “unique, human-readable new generic names”. One of possible ways is just to join the genus name and species epithet together. Then, *Chlorophytum alpinum* Benth. ex Baker might receive new generic name *Chlorophytum_alpinum* (with underscore), and the full binomial will sound like *Chlorophytum_alpinum alpinum*. The authorship of these names is better to standardize in some particular way, like, for example, botanical “auct.” or “hort.” Some rule which dis-recommend to add any second species into these genera, might be also useful.

3 Conclusions

This note was written in hope that idea of how to stabilize biological nomenclature will be picked up by the community. Then, if any consensus will be reached, this (or some other stabilization ideas) will be possible to implement.

Naturally, there are many questions ready to rise, and discussion on this topic is welcomed.

This text originated first from several conversations with untimely deceased Andrey Ukrainsky, Coccinellidae coleopterologist.

Everything in this note is just a personal opinion of the author. This note must not be considering as proposing any particular new biological name.

4 Literature cited

Linnaeus C. 1753. *Species Plantarum*. Holmiae.