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## **Electronic Appendix 1**. – *Technical description of the Pladias database*

To account for all the specifics of different source databases, we developed the Pladias database model for plant occurrence data almost from scratch, but using experience from the previous project Florabase.cz. It is designed as a web-based granted-access application respecting ergonomics of shared data handling. As the long-time sustainability is needed, we adopted Open Source third-party components as much as possible without any software licenses expenditures. The data store is based on a PostgreSQL object-relational database system with the spatial extension PostGIS. The backend of the application is developed in Java using Play framework; map outputs are handled by GeoServer. The core of the frontend is based on OpenLayers framework. Data security is ensured by saving a complete history of records and user-based view/edit access rights.

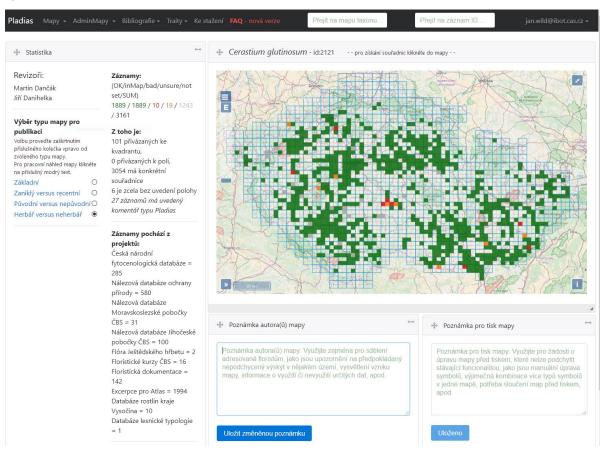
**Table E1.1.** – List of main fields available in the plant distribution module of the Pladias database. Obligatory fields are in bold. \* Location has to be defined at least by one of these entries.

Field name	Description
Taxon name	Scientific name following the checklist of the Czech flora (Danihelka et al. 2012,
	including changes adopted later)
Original taxon	Scientific name according to the original data source
name	
Locality	Description of the locality including the name of the nearest village or town
Closest settlement	Village, town or city either set by the author as the closest populated place, or
	automatically assigned based on the coordinates if the field was empty in the original
	record
District	Administrative district entered either by the author or filled automatically based on the
	coordinates
Elevation (m)	Altitude above sea level as a single value or a range

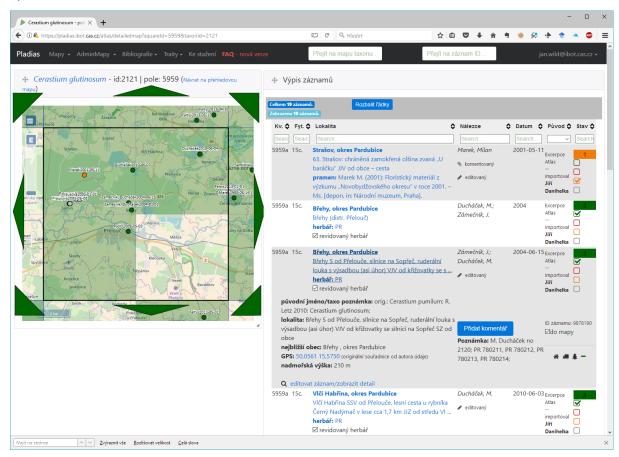
Coordinates*	Geographical coordinates in the WGS84 coordinate system (several formats are
	accepted)
Source of	Whether the coordinates were taken at the time of recording or derived later based on
coordinates	the description of the locality
Horizontal accuracy	A distance from the indicated coordinates within which the true locality is expected to
(m)	occur
Date	Date of record (various formats are accepted)
Recorder(s)	Author(s) of the record
Source	Original source (e.g. herbarium specimen, publication, etc.)
Phytogeographical	Phytogeographical subdistricts based on an update of the Skalický (1988) map as
region	available in Kaplan (2012)
Quadrant*	Quadrant of the basic field of the mapping grid of the Central European floristic
	mapping project. For historical records assignment of one record to several quadrants
	is allowed, but this is not supported for newly entered records. Information whether
	the quadrants were taken from the source or assigned automatically based on the site
	coordinates is recorded.
Comment	Comment given by the recorder (e.g. population size, taxonomic comments, etc.)
Original ID	Unique identification of the record taken from the original source, if available
Herbarium	For records based on a herbarium specimen: the acronym of the public herbarium
	according to Thiers (2018) or the name of the private herbarium
Identified by	Name of the expert who identified the specimen (mostly in cases of records based on a
	herbarium specimen)
Comment on	Comment related to the original record (e.g. number of the table in the original
excerption	literature, source of unpublished records)
Environment	E.g. slope, aspect, soil type or vegetation type
Status of occurrence	Spontaneous, spontaneous secondary, planted or not set
Record ID	Unique ID in Pladias
Batch ID	Unique ID of a group of records imported together
Importer	Name of the person who imported the record
Project	Name of the original database or project

**Figure E1.1.** – Graphical user interface of the Pladias database in module Occurrence and mapping: a) data overview for a particular taxon, b) data validation based on occupied quadrants selected from the map, c) editing a particular record and d) list of records as a result of a query filled on search form.

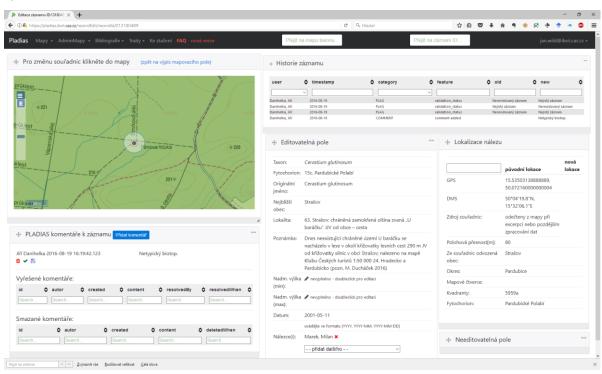
a)



b)



c)



## d)

