



PLAZI

TAKING CARE OF FREEDOM

<https://plazi.org/>





GOLDENGATE IMAGINE STRUCTURE

Getting used to GGI and its
tools and functions

Julia Giora
Jonas Castro
Donat Agosti

<https://plazi.org/>

➤ Download GGI

- JAVA is required in your computer. You need to download the Imagine (PDF based) version at:
<https://tb.plazi.org/GgServer/Downloads/GgImagine-Default.imagine.zip>
- Then you need to unzip it directly where you want to have the software installed. For example, the root folder of the C: or D: drives
- After that you need to update the software by opening it once, because the version on the website is not the latest version

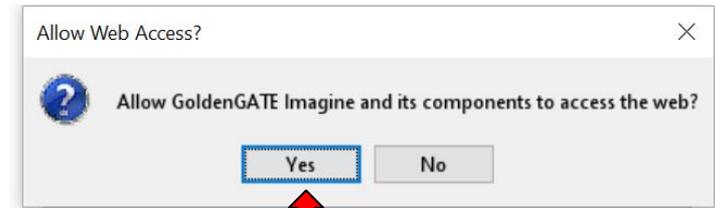


➤ Installing and opening GGI

- After that you need to update the software by opening it once, because the version on the website is not the latest version.

Open “GgImagine” application and allow its access to the web

 Gamta	12/14/2022 4:25 AM	Executable Jar File	1,789 KB
 GamtalmagingAPI	7/27/2021 3:29 AM	Executable Jar File	174 KB
 GgImagine	2/4/2020 5:58 AM	Windows Batch File	1 KB
 GgImagine.cnfg	4/13/2023 5:31 PM	CNFG File	50 KB
 GgImagine.cnfg.2023-04-13-17-31-10.old	4/13/2023 5:31 PM	OLD File	50 KB
 GgImagine.contextMenu.cnfg	2/4/2020 5:58 AM	CNFG File	1 KB
 GgImagine	2/4/2020 5:58 AM	Application	78 KB
 GgImagine	3/27/2023 4:47 AM	Executable Jar File	662 KB
 GgImagine.menus.cnfg	9/15/2022 9:55 PM	CNFG File	4 KB
 GgImagine.pdfDecoderCharset.cnfg	2/4/2020 5:58 AM	CNFG File	1 KB
 GgImagine	2/4/2020 5:58 AM	Shell Script	1 KB



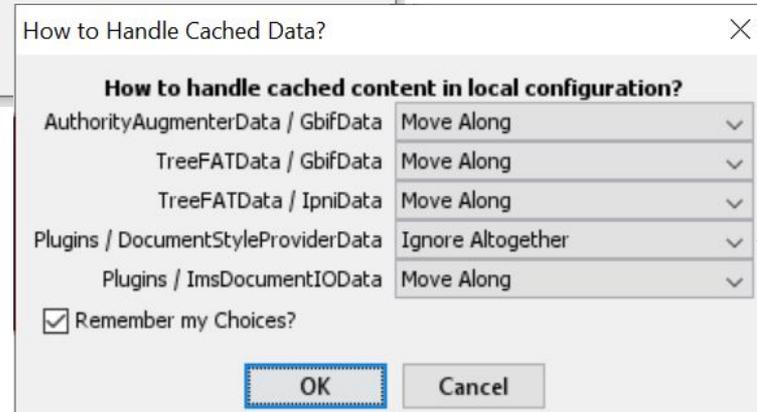
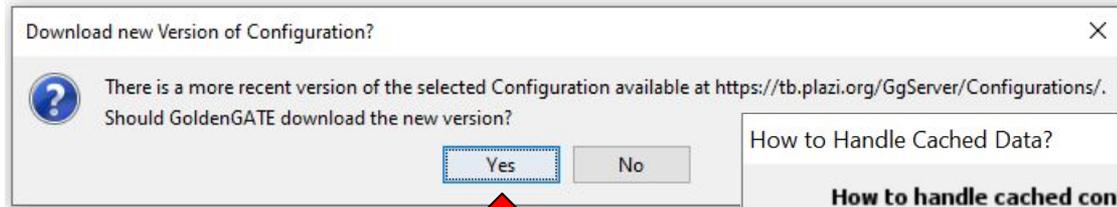
➤ Installing and opening GGI

- DO NOT (ever) click on any skip
- “Yes” to download new versions and select “Move Along” always when asked. Do not choose “Ignore All Together”

GoldenGATE Imagine Starting - Downloading Updates

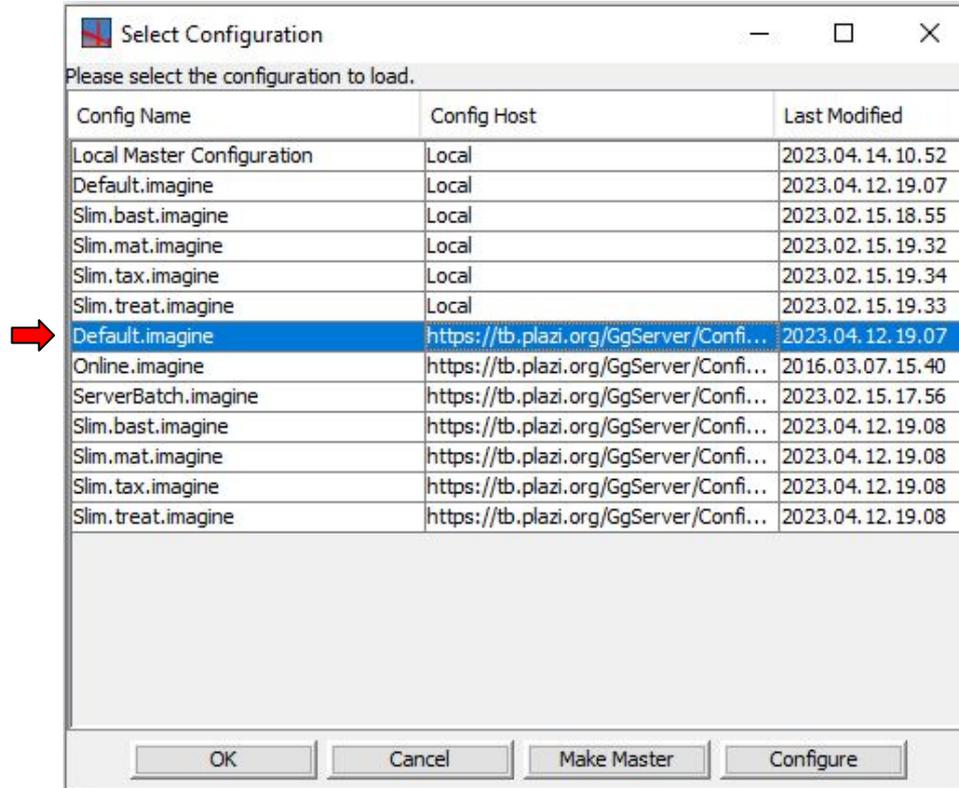
- update 'GgUpdate.IM.20210405-1524.zip' is available locally.
- update 'GgUpdate.IM.20161109-1142.zip' is out of date.
- update 'GgUpdate.IM.20190912-1344.zip' is out of date.

Skip



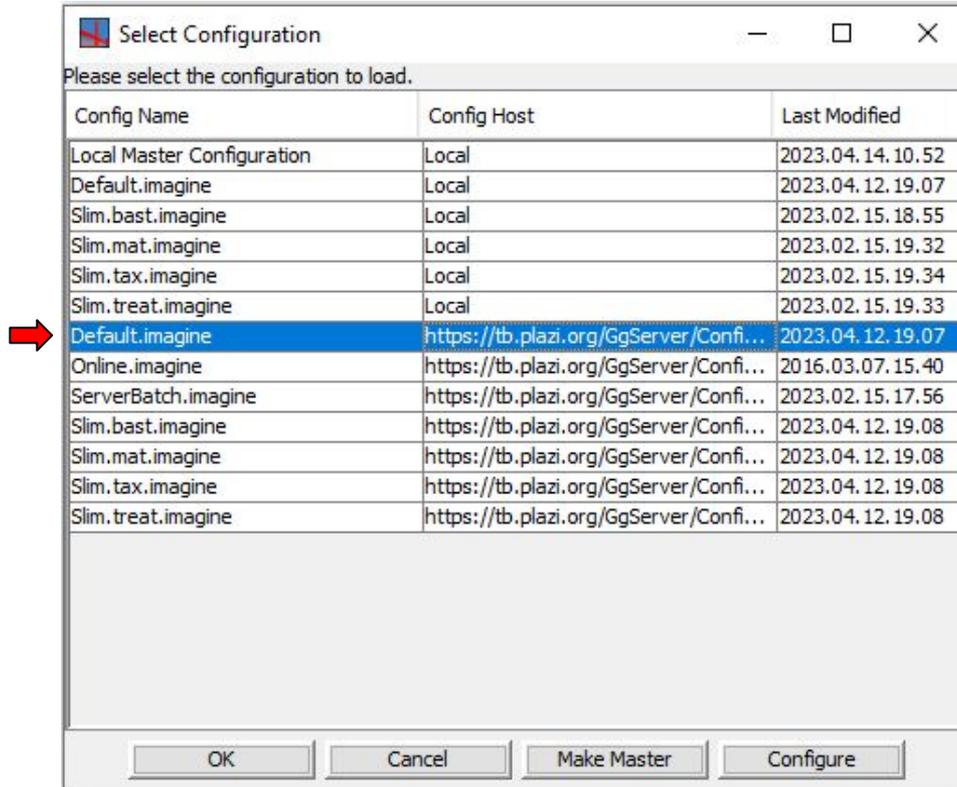
➤ Installing and opening GGI

- Select “Default.imagine” with the Plazi server option



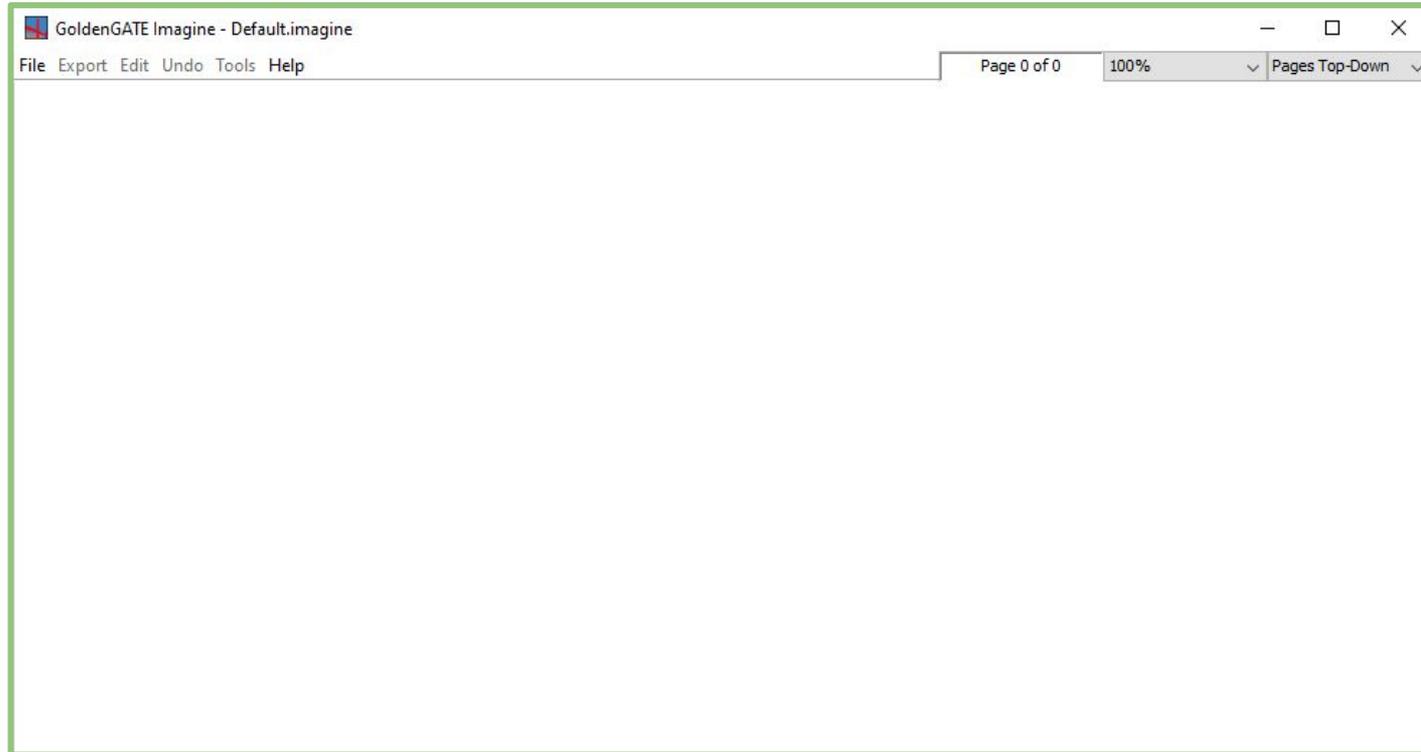
➤ Installing and opening GGI

- Select “Default.imagine” with the Plazi server option



➤ Installing and opening GGI

- You should get to this screen



➤ **Log in to GGI**

- **The first action is to log in GGI**

Click on “File” -> “Load Document from GoldenGATE Server”

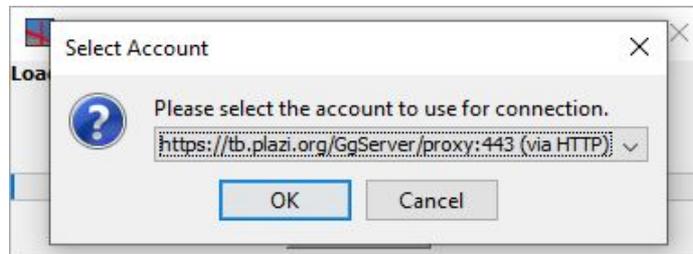
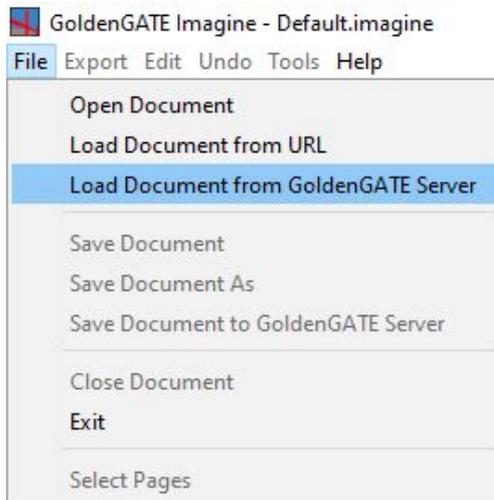
Choose the Plazi account and click “OK”

Fill your username and password (provided to you by Plazi team)

After logged in, you can cancel the “Open Document Directly” box that appears, asking a Document ID



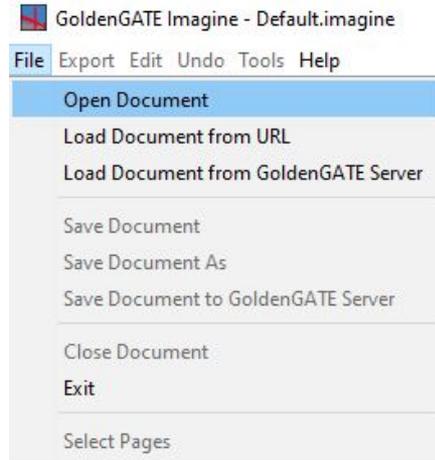
➤ Log in to GGI



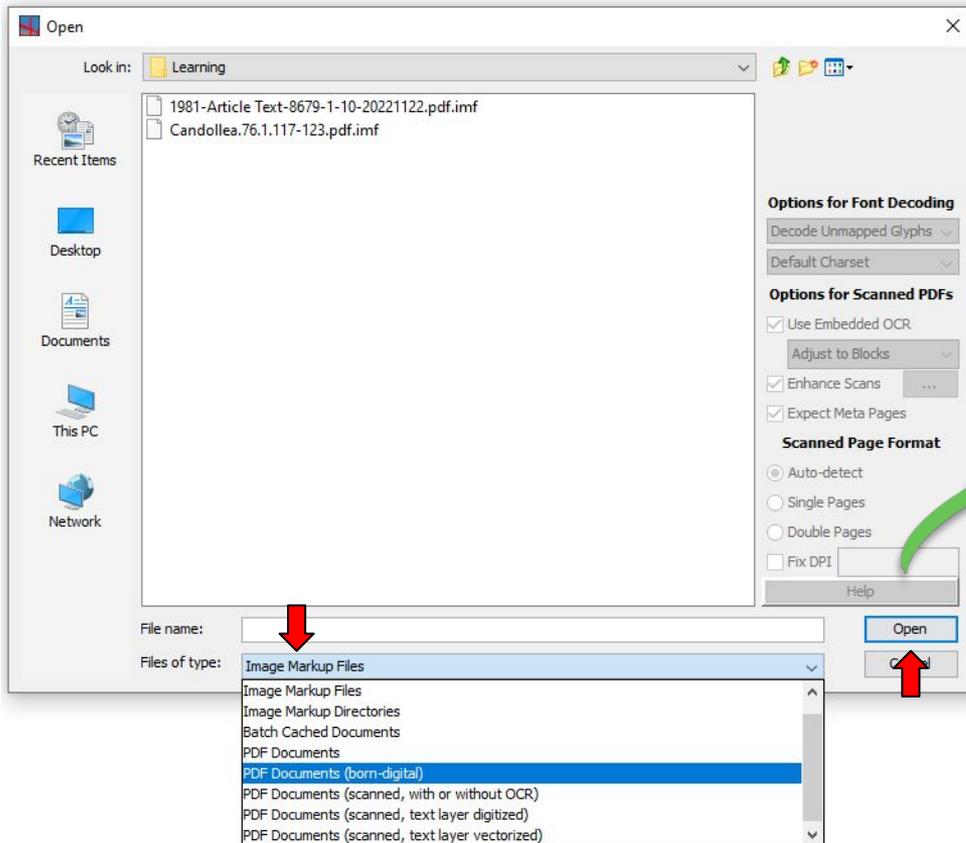
➤ Opening a document

- To open document from local device, click on “File” -> “Open Document”

Choose between opening a PDF (born-digital or scanned) or an IMF file



➤ Opening a document



General PDF Loading Modes

Because PDF documents vary widely in the nature of their content, GoldenGATE Imagine has different modes for decoding them:

- **PDF documents:** Generic mode, lets the PDF decoder determine which of the four more specific modes (below) to use, based upon an overall assessment of the PDF. Use this only if you are uncertain about the nature of the PDF at hand.
- **PDF documents (born-digital):** For born-digital PDFs, generated from text written in text processors or layout software. All bitmap images are considered illustrations.
- **PDF documents (scanned, with or without OCR):** For PDFs that bundle scans of the individual pages of a paper-based document. Any OCR embedded within the PDF can be used, and the exact positioning of the individual words can be adjusted to fit the text in the underlying scans as closely as possible.
- **PDF documents (scanned, text layer digitized):** For scanned PDFs in whose scans the text layer has been *completely replaced* (as opposed to supplemented) with OCR output, basically producing a PDF whose text renders like in a born-digital one, but onto the backdrop of scanned page backgrounds. In particular, there is no actual scanned text anymore to anchor the OCR to.
- **PDF documents (scanned, text layer vectorized):** For scanned PDFs in whose scans the text layer has been replaced with PDF vector graphics, with the latter bundled into special PDF fonts, i.e. DjVu compression.

Options for Font Decoding

Rendered text in born-digital PDFs is mostly represented in the form of strings with 8 bits per character, so representing Unicode characters outside the ANSI range requires a custom arrangement of the characters in the fonts embedded in the PDF. To accurately map such custom encoder characters to their corresponding Unicode points, fonts embedded in PDFs provide a **Unicode mapping** data structure, intended to facilitate accessibility features like Braille output or text-to-voice, and also to support accurate copy&paste.

However, this data structure is not always present, and sometimes incomplete. On top of that, since most PDF viewers use any given Unicode mapping as the basis for copy&paste operations, an intentionally erroneous (often chaotic) Unicode mapping can also be abused to effectively foil copy&paste operations by reducing their result to complete garble.

To overcome these latter obstacles (if present), the PDF decoder has various modes of approaching embedded fonts. In general, if the Unicode mappings in a given PDF are known to be good and accurate, a more trusting approach is perfectly fine, and also requires less computational effort. On the other hand, the more computationally intensive approaches can overcome a much wider range of shortcomings and obfuscation techniques. The particular font decoding modes are:

- **Do Not Decode Fonts:** Takes any given Unicode mapping at face value, supplemented with the raw 8-bit values from the PDF strings, not even rendering the glyphs. This mode cannot determine font style (bold, italics) or the type of a given font (serif vs. sans-serif vs. monospaced) beyond hints from the font name. This mode is mostly good for basic PDF to text conversion.
- **Render Glyphs Only:** Takes any given Unicode mapping at face value, supplemented with the raw 8-bit values from the



➤ Scanned documents

- Depending on the quality of the scan, the OCR will be better or worst
- Remember to select 'PDF Documents (scanned)' when you open the file in GGI
- Move the 'weight of OCR' bar (close to the 'word' box in the Display Control) to the right to be able to fix OCR



➤ Scanned documents



croisement de la ligne médiane avec le bord antérieur de l'aire frontale externe. Les quatre taches triangulaires du mésonotum sont équivalentes et l'on retrouve quatre macules rondes également très semblables entre elles en avant de l'élévation cruciforme. Dessous du thorax couleur noisette, de même que les pattes. Opercules jointifs, le rostre dépassant de peu le point de jonction postérieur. Abdomen bistre, légèrement plus clair sur les cymbacalyptes. Maculature apicale des homélytres plus déliée que chez *U. giovanninae*; coloris moins contrastés sur l'aire apicale des ailes postérieures dont une teinte brique occupe principalement l'aire basale.

Dimensions Longueur du corps = 32 mm ; envergure = 98 mm ; largeur de la

Dimensions Longueur du corps = 32 mm ; envergure = 98 mm ; largeur de

Bold Italic

Dimensions Longueur du corps = 32 mm ; envergure = 98 mm ; largeur de

inst. visibles de profil. Urite X particulièrement robuste mais produisant des lobes



➤ Opening a document

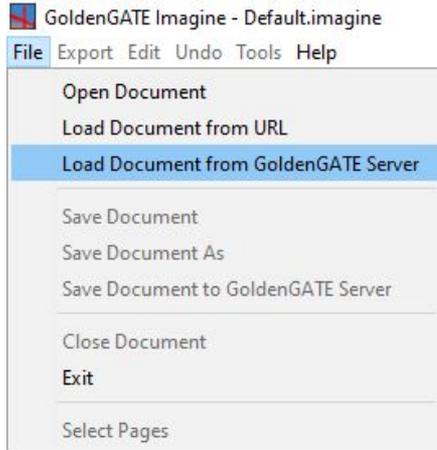
- To open IMF file from Plazi server, using UUID found in the TreatmentBank publication page

Click on “File” -> “Load Document from GoldenGATE Server”

You need to log in GGI if you still did not do it

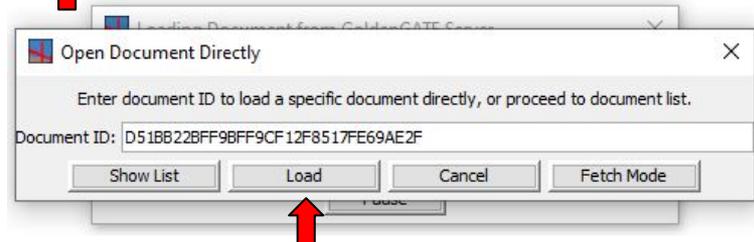
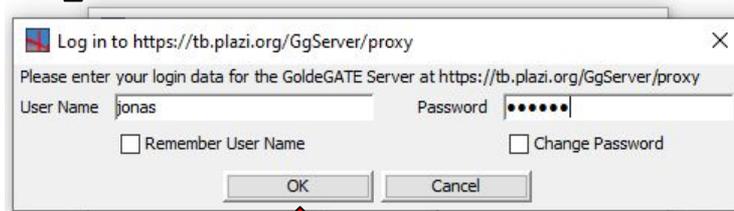
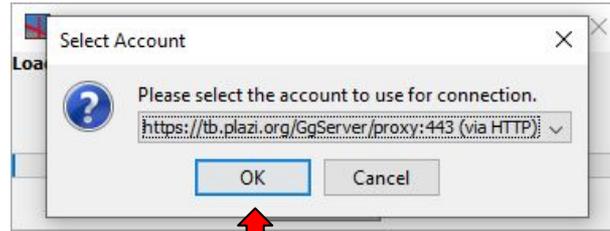


➤ Opening a document



tb.plazi.org/GgServer/summary/D51BB22BFF9BFF9CF12F8517FE69AE2F

UUID



➤ Annotations in GGI

- As we use the tools for individual extraction, new annotations are added to our “Display Control” (at the right side of your view)
- In order to work with them, they need to be ticked

The image displays three panels from the GGI interface. The first panel, titled "Display Control", contains a list of elements with checkboxes and "Show All" / "Hide All" buttons. The second panel, titled "Annotations", contains a list of annotations with checkboxes and "Show All" / "Hide All" buttons. The third panel is a list of annotations with checkboxes.

Display Control	Annotations	Annotations List
<input type="checkbox"/> word	<input type="checkbox"/> accessDate	<input type="checkbox"/> specimenCode
<input type="checkbox"/> block	<input type="checkbox"/> author	<input type="checkbox"/> specimenCount
<input type="checkbox"/> column	<input type="checkbox"/> bibRef	<input type="checkbox"/> subSection
<input type="checkbox"/> image	<input type="checkbox"/> bibRefCitation	<input type="checkbox"/> subSubSection
<input type="checkbox"/> line	<input type="checkbox"/> bookContentInfo	<input type="checkbox"/> superScript
<input type="checkbox"/> paragraph	<input type="checkbox"/> caption	<input type="checkbox"/> tableCitation
<input type="checkbox"/> region	<input type="checkbox"/> collectingCountry	<input type="checkbox"/> taxonomicName
<input type="checkbox"/> table	<input type="checkbox"/> collectingDate	<input type="checkbox"/> taxonomicNameLabel
<input type="checkbox"/> tableCell	<input type="checkbox"/> collectingMunicipality	<input type="checkbox"/> title
<input type="checkbox"/> tableCol	<input type="checkbox"/> collectingRegion	<input type="checkbox"/> treatment
<input type="checkbox"/> tableRow	<input type="checkbox"/> collectionCode	<input type="checkbox"/> typeStatus
		<input type="checkbox"/> volumeTitle
		<input type="checkbox"/> year



➤ After loading document

Kalanchoe darainensis (Crassulaceae), a new species from northeastern Madagascar

David-Paul Klein, Ronen Shtein, Louis Nusbaumer & Martin W. Callmander

Abstract

KLEIN D-P & R; SHTEIN L; NUSBAUMER L; MW; CALLMANDER M (2021) *Kalanchoe darainensis* (Crassulaceae): a new species from northeastern Madagascar. *Convolvulus* 76: 117–125. <https://doi.org/10.1111/cv.12512>

A few species of small rosulate and upright-flowered *Kalanchoe* Adafs (Crassulaceae) from northeastern Madagascar is described and illustrated. *Kalanchoe darainensis* D-P Klein & Callm. Morphologically, *Kalanchoe darainensis* is most similar to *Kalanchoe blossfeldiana* Poelln. and *Kalanchoe globulifera* H. Perrier which are known from the northwestern Tsaratanala Massif c. 100 km southwest of Daraina. Detailed notes of the habitat and ecology of *Kalanchoe darainensis* are provided as well as a short taxonomical overview of all species of the *Kalanchoe* subgenus *Kalanchoe* from Madagascar. A key to the species is provided. Despite its restricted distribution in the protected Aït Sahabé massif, the few species is preliminarily assessed as “Least concern” (LC) using the IUCN Red List Criteria.

Résumé

KLEIN D-P & R; SHTEIN L; NUSBAUMER L; MW; CALLMANDER M (2021) *Kalanchoe darainensis* (Crassulaceae): une nouvelle espèce de Madagascar. *Convolvulus* 76: 117–125. <https://doi.org/10.1111/cv.12512>

Une nouvelle espèce de *Kalanchoe* Adafs (Crassulaceae) petite rosulée et à fleurs dressées du Nord-est de Madagascar est décrite et illustrée. *Kalanchoe darainensis* D-P Klein & Callm. Morphologiquement, *Kalanchoe darainensis* est plus proche de *Kalanchoe blossfeldiana* Poelln. et *Kalanchoe globulifera* H. Perrier qui sont connues du Nord-ouest du massif de Tsaratanala c. 100 km au sud-ouest de Daraina. Des notes détaillées sur l'habitat et l'écologie de *Kalanchoe darainensis* sont fournies ainsi qu'un bref aperçu taxonomique des espèces affines de *Kalanchoe* subgenus *Kalanchoe* de Madagascar. Un résumé de ces espèces ainsi qu'une clé d'identification de ces espèces Malgache sont fournis. Malgré sa distribution restreinte dans le massif protégé d'Aït Sahabé, la nouvelle espèce est préliminairement évaluée comme «Préoccupation mineure» (LC) et utilisant les critères de la Liste Rouge de l'IUCN.

Keywords

CRASSULACEAE – *Kalanchoe* – Madagascar – Daraina – Loky-Mafambato – New species

Addresses of the authors

DPK: Hamburg; University of Berlin; Späthstrasse 9/106 Berlin D10245 Germany; E-mail: david-paul.klein@agrar.hu-berlin.de

RS: The South African Museum of Natural History, Tel Aviv University, Ramat Gan, 5150400, Israel

LN: MGC, Confédération africaine de Géométrie, Université d'Antananarivo, Antananarivo, Madagascar

Submitted: December 18, 2020; Accepted: February 16, 2021

First published online: March 22, 2021

ISSN: 0378-2067 • Online ISSN: 1928-3668 • <https://doi.org/10.1111/cv.12512> • CONSERVATOIRE FLORIFÈRE, JARDIN BOTANIQUE DE GENÈVE

118 – A new species of *Kalanchoe* (Crassulaceae) from Madagascar Convolvulus 76, 2021

Introduction

The genus *Kalanchoe* Adafs (Crassulaceae: Kalanchoideae) comprises more than 150 species known to date and occurs in Madagascar, Africa and tropical Asia. Currently 80 species and forms are recognized if Madagascar all but one of which are endemic to the Great Island MADAGASCAR (CATALOGUE 2021). The genus of *Kalanchoe* consists of three subgenera: the autochthonous *Kalanchoe* subgenus *Kalanchoe* which is known from Madagascar, Africa and Asia as well as *Kalanchoe* subgenus *Bryophyllum* (Salisb.) Koores and *Kalanchoe* subgenus *Kirchingia* (Baker) Gideon & Sm. & Figueiredo both endemic to Madagascar (SMITH & FIGUEIREDO 2018).

Kalanchoe subgenus *Kalanchoe* includes species that share the following characters: plants are usually herbaceous or woody-arborescent; calyx infused for most of its length with a short to distinct thickened basal segments of the free usually addressed to the corolla tube; filaments inserted above the middle of the corolla tube; rarely below; flowers typically erect; rarely semi-directional or pedicel; leaves and inflorescences never bulbiferous; carpels covered usually much longer than the styles; scales elongated linearly with a length/width ratio usually > 2 and here included in the corolla tube or very slightly extended beyond it; with a spherical corolla; leaf of the others (BOITEAU & ALLORGE-BOITEAU 1995; DESCONGS 2003; SMITH & FIGUEIREDO 2018).

Among the Malagasy representatives of *Kalanchoe* subgenus *Kalanchoe*, several morphologically similar species were historically placed in the “Group 1” of RAYMOND-HAMET (1907) to emphasize the morphological similarities they share with species indigenous to mainland Africa; if contrast to similarities shared with other species from Madagascar. These species are: *K. bosii* Ravyn-Hamet & H. Perrier, *K. briquetii* Ravyn-Hamet & H. Perrier, *K. chaponii* Ravyn-Hamet & H. Perrier and *K. globulifera* H. Perrier and *K. globulifera* var. *occidentalis* H. Perrier (vs. *K. blossfeldiana* Poelln.) (LATEL & BOITEAU & ALLORGE-BOITEAU 1995; and ALLORGE-BOITEAU (1996) proposed to further subdivide these species into two informal groups: “Occidentales” and “Globuliferales” and with *K. varanensis* H. Perrier, *K. boissii* Ravyn-Hamet & H. Perrier and *K. lanceolata* (Forsk.) Pers. The group “Globuliferales” was defined based on the spherical corolla lobes (“globules”) of the flowers whereas species placed in “Occidentales” have terminal inflorescences and glabrous pilose (except *K. blossfeldiana*) and do not have the arborescent or corolla lobes. However, he added that the latter group “is present pas beaucoup d’homogénéité” do not present much homogeneity (BOITEAU & ALLORGE-BOITEAU 1995: 187). They also identified the morphological affinity of both groups to some continental African species as opposed to other Malagasy representatives of *Kalanchoe* subgenus *Kalanchoe* such as the species they placed in the informal “Lafregerae” group.

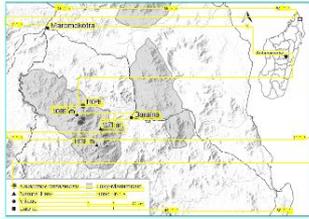


Fig. 1. Distribution map of *Kalanchoe darainensis* D-P Klein & Callm. (map derived from open data sources: <https://earthdata.nasa.gov/OpenStreetMap/> and VOA’s SMT, 2020).

Excluding *Kalanchoe varanensis* and *K. boissii* that have unidirectional and zygomorphic flowers and distinct corolla lobes we consider the species of both informal groups “Occidentales” and “Globuliferales” to form a common species group. These are small statured shrubs to medium sized herbs usually at least partially covered with a glabrous to tomentose that have erect actinomorphic flowers highly reduced to distinct calyx tube to glabrous to narrowly lobed sepals usually acute to acuminate and linear to filiform ectactylous. Two further recently described species *K. antennifera* Desc. and *K. varanensis* Desc. and Lavrion can also be placed in this species group based of their morphological similarities with other representatives from the vicinity of Aït Sahabé in the Tsitry de Bemahara in western Madagascar. (Mafambato) pers. comm. The precise type locality was unknown to DESCONGS (2004) who stated “Africa” in the protologue. Moreover, despite its occurrence in Africa, virtually across continental Africa and Madagascar, the exact natural geographical distribution range of *K. lanceolata* remains open to conjecture. *Kalanchoe lanceolata* rather shares character expressions with species of *Kalanchoe* subgenus *Kalanchoe* from beyond Madagascar and accordingly we refrain from placing it in this otherwise Malagasy group.

During the floristic of the Daraina region (Loky-Mafambato; see PHILLIPSON et al. 2018) four specimens of small rosulate glabrous succulent plants were collected in the massif of Aït Sahabé (Fig. 1). These specimens have the erect flowers linear to filiform ectactylous apically inserted filaments and reduced calyx tube that are found in representatives of *Kalanchoe* subgenus *Kalanchoe* and were all originally determined as representatives of *K. pumila* Baker. However, *K. pumila* differs from the collected specimens by being taller (20–30 cm; all 1-hour-pruned) by lack of filaments and by having linear pink-coloured, cannot dilate corolla tubes (BAKER 1884; BOITEAU & ALLORGE-BOITEAU &

Display Control

word

Regions, Blocks, etc.

Show All Hide All

block

column

image

line

paragraph

region

Annotations

Show All Hide All



➤ After detecting document structure

Kalanchoe darainensis (Crassulaceae), a new species from northeastern Madagascar

David-Paul Klein, Ronen Shtein, Louis Nusbaumer & Martin W. Callmander

Abstract

KLEIN D-P, SHTIEN R, NUSBAUMER L & CALLMANDER M-W (2021) *Kalanchoe darainensis* (Crassulaceae): a new species from northeastern Madagascar. *Plant Systematics* 76: 117–125. <https://doi.org/10.1111/pls.12512>

A few species of small rosulate and upright-flowered *Kalanchoe* Adafs (Crassulaceae) from northeastern Madagascar is described and illustrated. *Kalanchoe darainensis* D.P. Klein & Callm. Morphologically, *Kalanchoe darainensis* is most similar to *Kalanchoe blossfeldiana* Poelln and *Kalanchoe globulifera* H. Perrier which are known from the northwestern Tsaratanana Massif c. 100 km southwest of Darain. Detailed notes of the habitat and ecology of *Kalanchoe darainensis* are provided as well as a short taxonomical overview of allied species of the *Kalanchoe* subgenus *Kalanchoe* from Madagascar. A cladistic key to identification key to those species. Despite its restricted distribution, the protected Aïtsahabe massif, the few species is preliminarily assessed as “Least Concern” (LC) using the IUCN Red List Criteria.

Résumé

KLEIN D-P, SHTIEN R, NUSBAUMER L & CALLMANDER M-W (2021) *Kalanchoe darainensis* (Crassulaceae): une nouvelle espèce du Nord-est de Madagascar. *Plant Systematics* 76: 117–125. <https://doi.org/10.1111/pls.12512>

Une nouvelle espèce de *Kalanchoe* Adafs (Crassulaceae) petite rosulée et à fleurs dressées du Nord-est de Madagascar est décrite et illustrée. *Kalanchoe darainensis* D.P. Klein & Callm. Morphologiquement, *Kalanchoe darainensis* est plus proche de *Kalanchoe blossfeldiana* Poelln et *Kalanchoe globulifera* H. Perrier qui sont connues du Nord-ouest du massif de Tsaratanana c. 100 km au sud-ouest de Darain. Des notes détaillées sur l'habitat et l'écologie de *Kalanchoe darainensis* sont fournies ainsi qu'un bref aperçu taxonomique des espèces alliées de *Kalanchoe* de Madagascar. Un résumé de l'écologie et de l'habitat de cette espèce est également fourni. Malgré sa distribution restreinte dans le massif protégé d'Aïtsahabe, la nouvelle espèce est préliminairement évaluée comme «Préoccupante mineure» (LC) et utilisant les critères de la Liste Rouge de l'UICN.

Keywords

CRASSULACEAE = *Kalanchoe* = Madagascar = Darain = Loky-Mafambato = New species

All new species of *Kalanchoe* (Crassulaceae) from Madagascar | *Plant Systematics* 76 (2021)

Introduction

The genus *Kalanchoe* Adafs (Crassulaceae: Kalanchoideae) comprises more than 150 species known to date and occurs in Madagascar, Africa, Arabia and tropical Asia. Currently 80 species and photospecies are recognized in Madagascar all but one of which are endemic to the Great Island (MADAGASCAR CATALOGUE 2021). The genus of *Kalanchoe* consists of three subgenera: the autonymic *Kalanchoe* subgenus *Kalanchoe* which is known from Madagascar, Africa, Arabia and Asia, as well as *Kalanchoe* subgenus *Brophyllan* (Schubert) Koores of *Kalanchoe* subgenus *Kalanchoe* (Baker), Gilkey, H. Smith & Figueiredo both endemic to Madagascar (SMITH & FIGUEIREDO 2018).

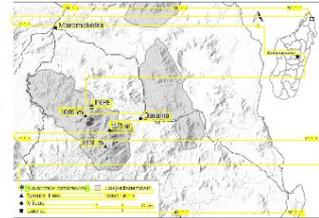


Fig. 1. Distribution map of *Kalanchoe darainensis* (red dots) and other *Kalanchoe* species (blue dots) from Madagascar. The map shows the distribution of *Kalanchoe darainensis* (red dots) and other *Kalanchoe* species (blue dots) from Madagascar. The map shows the distribution of *Kalanchoe darainensis* (red dots) and other *Kalanchoe* species (blue dots) from Madagascar.

Kalanchoe subgenus *Kalanchoe* includes species that share the following characters: plants are annual or perennial herbaceous or woody, arborescent; calyx is fused for most of its length with a short to distinct tube; sepal segments often free, usually adpressed to the corolla tube; filaments inserted \pm above the middle of the corolla tube; rarely below; flowers typically erect, rarely omni-directional or pedicel; leaves and inflorescences fewer, bulbiferous; carpels convergent; usually much longer than the style; scales elongated to linear with a length/width ratio usually ≥ 3 ; athers included in corolla-tube or very slightly exserted; often dressed with a spherical cofferlike glabrous of the athers (BOITEAU & ALLORGE-BOITEAU 1995; DESCONGES 2003; SMITH & FIGUEIREDO 2018).

Among the Malagasy representatives of *Kalanchoe* subgenus *Kalanchoe*, several morphologically similar species were historically placed in Group 13 of RAYMOND-HAMET (1907) to so emphasize the morphological similarities they share with species of *Adansonia* from Africa. In contrast to similarities shared with other species from Madagascar, these species are *K. boissii* Raym. Hamet & H. Perrier, *K. briquetii* Raym. Hamet, *K. chapotii* Raym. Hamet, *K. globulifera* H. Perrier, *K. globulifera* var. *lucida* H. Perrier, *K. blossfeldiana* Poelln, *K. globulifera* var. *lucida* H. Perrier (see *K. blossfeldiana* Poelln) and BOITEAU & ALLORGE-BOITEAU (1995) and ALLORGE-BOITEAU (1996) proposed to further subdivide these species into the two informal groups “Occidentales” and “Globuliferae” along with *K. uromatica* H. Perrier, *K. bouveitii* Raym. Hamet & H. Perrier and *K. lanceolata* (Forssk.) Pers. The group “Globuliferae” was defined based of the spherical cofferlike glabrous (“globules”) of the athers whereas species placed in “Occidentales” have terminal inflorescences and glabrous pilose (except *K. blossfeldiana*) and do not have the athermottled cofferlike glabrous. However, they added that the latter group “Ce présente pas beaucoup d’homogénéité” (do not present much homogeneity) (BOITEAU & ALLORGE-BOITEAU 1995: 187). They also identified the morphological affinity of both groups to some continental African species as opposed to other Malagasy representatives of *Kalanchoe* subgenus *Kalanchoe* such as the species they placed in the informal “Lafigeriae” group.

Excluding *Kalanchoe areolata* and *K. bouveitii* that have omni-directional and zygomorphic flowers and distinct corolla tubes we consider the species of both informal groups “Occidentales” and “Globuliferae” to form a common species group. These are small-statured shrubs to medium-sized herbs usually at least partially covered with a glabrous to tomentose that have erect, actinomorphic flowers highly reduced to distinct calyx tubes (e.g. bellid to narrowly funnelate shape) apically acute to acuminate and linear to filiform (actinoid) scales. Two further recently described species (*K. unimera* Desc and *K. parviana* Desc & Lavranos) can also be placed in this species group based of their morphology. *Kalanchoe unimera* originates from the vicinity of Aïtsahabe in the Tsitry de Bemahara in western Madagascar (Majelsordorff pers. comm.). The precise type locality was unknown to DESCONGES (2004) who stated “Africa” if the protologue. Moreover, despite its occurrence in Arabia virtually across continental Africa and in Madagascar, the exact natural geographical distribution range of *Kalanchoe* remains open to conjecture. *Kalanchoe lanceolata* rather shares character expressions with species of *Kalanchoe* subgenus *Kalanchoe* from beyond Madagascar and accordingly we refrain from placing it in this otherwise Malagasy group.

During inventories of the Darain region (now called Loky-Mafambato; see PHILLIPSON et al. 2018) four specimens of small rosulate glabrous pilose succulent plants were collected in the massif of Aïtsahabe (Fig. 1). These specimens have the most flowers linear to filiform (actinoid), stalks apically inserted, filaments and reduced calyx tube that are found in representatives of *Kalanchoe* subgenus *Kalanchoe* and were all originally determined as representing *K. pumila* Baker. However, *K. pumila* differs from the collected specimens by being taller (20–30 cm and flours purple) and lacking an infundibuliform and by having erect pink-coloured campanulate corolla tubes (BAKER 1884; BOITEAU & ALLORGE-BOITEAU

Display Control

- word
- Regions, Blocks, etc.
- Show All Hide All
- block
- column
- image
- line
- paragraph
- region

Annotations

- Show All Hide All
- caption
- emphasis
- figureCitation
- heading
- pageNumber
- pageTitle
- tableCitation



➤ Images or graphics

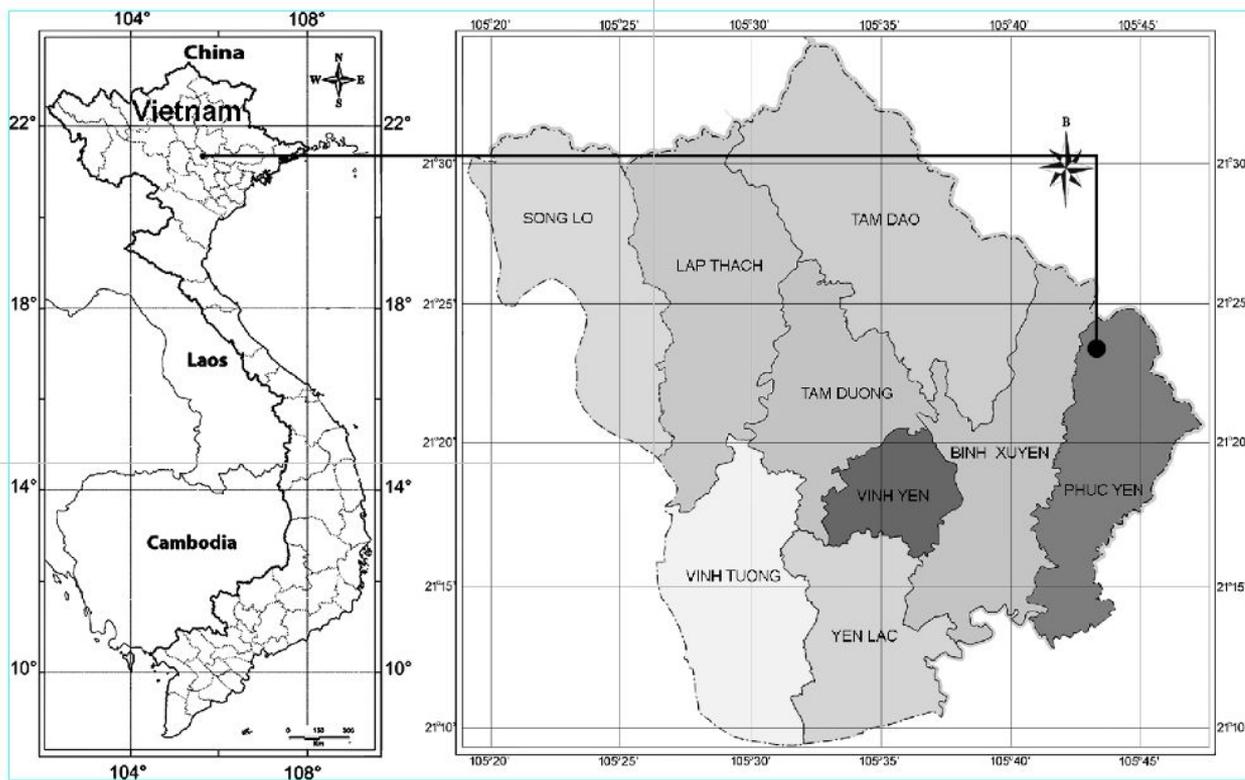


FIGURE 1. Map showing the type locality of *Cosmianthmemum melinhense*

Edit Attributes

image image at [142,1446,866,1671] on page 2

Add / Set Attribute

Attribute Value

OK Cancel

Edit Attributes

caption FIGURE 1. Map showing the ... *Cosmianthmemum melinhense*

X	ID-DOI:	http://doi.org/10.5281/zenodo.6333701
X	ID-Zenodo-Dep:	6333701
X	httpUri:	https://zenodo.org/record/6333701/files/figure.png
X	startId:	1.[136,229,1701,1723]
X	targetBox:	[142,1446,866,1671]
X	targetPageId:	1

Attribute Name Add / Set Attribute

Attribute Value

OK Cancel Next



➤ Tables

TABLE 1. Comparison of *Cosmianthemum melinhense* with its morphologically allied species

Morphological characters	<i>Cosmianthemum melinhense</i>	<i>Cosmianthemum guangxiense</i>	<i>Cosmianthemum knoxiiifolium</i>	<i>Cosmianthemum viriduliflorum</i>
Habit	herbs, 0.3–0.6 m tall	herbs, up to 70 cm tall	shrub, 60 cm tall	herbs, up to 60 cm tall
Stem	subterete, pubescent when young, soon glabrous	4-angled to subterete, sulcate, sparsely pubescent	terete, puberulent	terete, glabrous
Leaf size	12–16 × 4–6 cm	2–13.5 × 1.4–4 cm	8–20 × 1.8–7.3 cm	7–15 × 4–9 cm
Leaf shape	elliptic to ovate, lanceolate	ovate-elliptic to oblong-lanceolate	elliptic-lanceolate to lanceolate	ovate to broadly ovate
Petiole length	12–15 mm, pubescent	5–10 mm, pilose	6–32 mm, glabrous	10–25 mm, pubescent
Leaf surface	adaxially glabrous, abaxially pubescent along the veins	adaxially pilose toward base or along veins, abaxially glabrous	adaxially glabrous, abaxially puberulent along veins and margin	both surfaces glabrous
Lateral leaf veins	7–10 pairs	5–7 pairs	8–10 pairs	5–7 pairs
Inflorescence	compound dichasia in terminal or axillary axis, glandular, 7–10 cm	thyrses terminal, 3–10 cm long	thyrses terminal, thyrsoid, interrupted, 20–60 cm long	thyrses terminal, 4–10 cm long

 Edit Attributes ✕

caption TABLE 1. Comparison of *Cosmianthemum* ... morphologically alle...

ID-Table-UUID: F5F42BCDFF9DFF9AF1A78589FADFAE97

httpUri: <http://table.plazi.org/id/F5F42BCDFF9DFF9AF1A78589FADFAE97>

startId: 6. [136, 229, 158, 184]

targetBox: [144, 1432, 212, 2061]

targetIsTable: true

targetPageId: 6

Attribute Name ▼ Add / Set Attribute

Attribute Value ▼

- table
- tableCell
- tableCol
- tableRow



➤ **Wordflow**

- **Fixing wordflow**

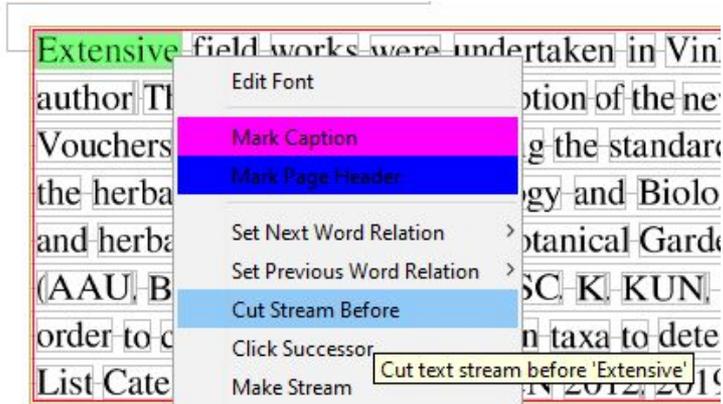
Check the 'word' box (mandatory). Cut the stream when needed and make the correct links.

You can use two combination of functions:

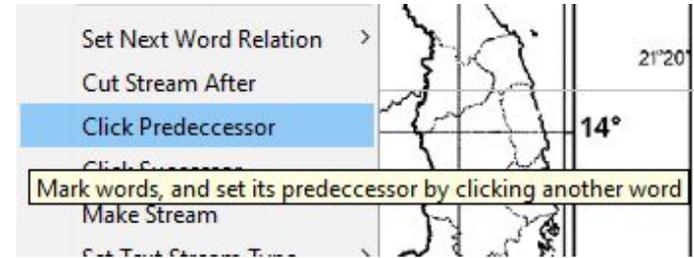
- **"Cut Stream Before" + "Click Predecessor"**
- **"Cut Stream After" + "Click Successor"**



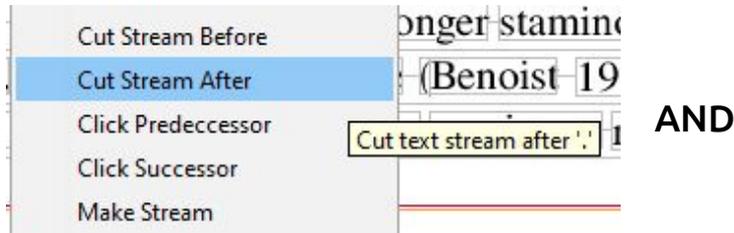
➤ Wordflow



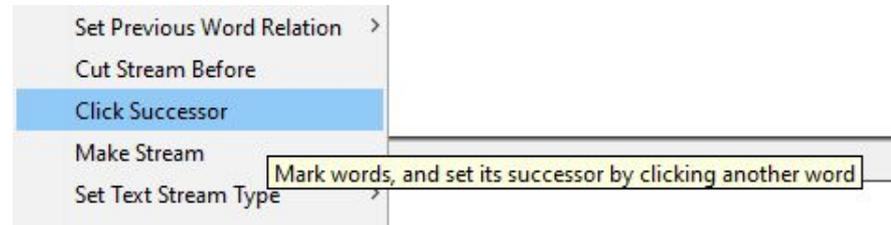
AND



OR



AND



➤ **Set Word Relation**

- **Set word relation between two words**

Click in one of them and choose “Set Next Word Relation” or “Set Previous Word Relation” and select the appropriate option

P.S:

- **Hyphenated word: syllables of the same word on different lines**
- **Line-broken word: compound words separated by hyphen, with each word on a different line**



➤ Set Word Relation

The Me Linh Station for Biodiversity was established in 1999 under the Vietnam Academy of Science and Technology to facilitate the floristic and taxonomic studies of the Province of the northeastern region of the country (Fig. 1). The station is a biodiversity hotspot. Its flora is rich. It is home to numerous Vietnamese endemics and has received international attention. Several new species were discovered (Kim *et al.* 2015, Hai *et al.* 2016). The genus *Cosmianthemum* Bremekamp (1960: 66) comprises 2, ins... pubesc... termin... corolla... 2, inse... pubesc... The... 2000... *et al.*... 2011... stamen... being... 2011, Deng & Gao, 2020) Previously, only one species, *C. knoxifolium*

The genus *Cosmianthemum* Bremekamp (1960: 66) comprises a diversity center in Borneo (Hansen 1985, Hu *et al.* 2011, Mabb... terminal, thyrsoid inflorescence, glandular-pubescent calyx, with corolla with its lower lip having purple spot at base, slightly curved, glabrous anthers with thecae parallel. (Bremekamp 1960, Hansen 1985, Scotland 2000) Molecular studies implied that it belongs to the subtribe Odontoneminae (Deng *et al.* 2011) being... 2011... was r...

- Edit subSection Attributes
- Copy subSection Attributes
- Remove subSection Annotation
- Split subSection Before
- Mark Caption
- Set Next Word Relation
- Set Previous Word Relation
- Click Successor
- Copy Text
- Show XML View of subSection
- More ...

- Separate Word
- Separate Word with Paragraph Break Before
- Second Part of Hyphenated Word
- Second Part of Line-Broken Word

- Edit subSection Attributes
- Copy subSection Attributes
- Remove subSection Annotation
- Split subSection Before

- Mark Caption
- Set Next Word Relation
- Set Previous Word Relation
 - Separate Word
 - Separate Word with Paragraph Break Before
 - Second Part of Hyphenated Word
 - Second Part of Line-Broken Word
- Click Successor
- Copy Text
- Show XML View of subSection



➤ Set Word Relation

mm long, 5-lobed; lobes linear-lanceolate, ca. 4 × 0.5–0.8 mm, subequal, apex acuminate, outside sparsely gland-tipped pubescent; inside densely gland-tipped pubescent. Corolla green-purple, 1.4–1.5 cm long, outside gland-tipped pubescent; tube basally cylindric and 1.5–2 mm wide for 4.5–5 mm long; limb strongly 2-lipped, lower lip violet dotted, 5–5.5 mm broad, 3-lobed, middle lobes bigger than laterals, middle ovate, ca. 2.5 mm long, laterals oblong, 1–1.5 × 2 mm; upper lip violet blotched, triangular, ca. 6 × 6 mm, 2-cleft. Stamens 2, exserted; filaments ca. 6 mm long; glabrous; anthers bithecaous, thecae oblong, ca. 2.5 mm long, superposed, mucous at base; staminodes 2, linear, 2–2.5 mm long, glabrous. Ovary glabrous, green, fusiform with nectary flower disc bowl-shaped at base; style 9–10 mm long, glabrous, stigma slightly 2-lobed. Capsule clavate, 2.5–2.8 cm long, sterile portion 1.2–1.6 cm long, puberulent. Seeds 4, ca. 3.5 × 5 mm, ovate, scarcely compressed, pale brown, rugulose-alveolate.

Etymology:—The species is named after the type locality, Me Linh Station for Biodiversity in Vinh Phuc Province

- Edit Annotation Attributes ... >
- Copy Annotation Attributes ... >
- Remove Annotation ... >
- Split treatment Before
- Split subSubSection Before
- Mark Caption
- Set Next Word Relation
- Set Previous Word Relation
 - Separate Word
 - Separate Word with Paragraph Break After
 - First Part of Hyphenated Word
 - First Part of Line-Broken Word
- Click Successor
- Show XML View ...

- Edit subSection Attributes
- Copy subSection Attributes
- Remove subSection Annotation
- Split subSection Before
- Mark Caption
- Set Next Word Relation >
- Set Previous Word Relation >
 - Separate Word
 - Separate Word with Paragraph Break Before
 - Second Part of Hyphenated Word
 - Second Part of Line-Broken Word
- Click Successor
- Copy Text
- Show XML View of subSection



➤ **Select regions or word strings**

- **There are two ways to select regions or word strings**
 - **Click near a word (but outside it) and drag your cursor around the word string to select it (region)**
 - **Click in a word and drag your cursor over the words until the end of the word string to select it (word string)**

This is useful in several ways, like make new annotations, and/or merge paragraphs, as you will see in this course



➤ Select regions or word strings

Selecting region

Taxonomic treatment

Cosmianthemum melinhense D.V.Hai, Z.L.Lin & Y.F.Deng, sp. nov. (Figs. 2–4)

Type:—VIETNAM, Vinh Phuc Province, Phuc Yen Town, Ngoc Thanh commune, elev. ca. 152 m, 21 October 2016, Do Van Hai, Trinh Xuan Thanh, DVH 149 (holotype HN, isotypes HN, IBSC)

Selecting word string

Taxonomic treatment

Cosmianthemum melinhense D.V.Hai, Z.L.Lin & Y.F.Deng, sp. nov. (Figs. 2–4)

Type:—VIETNAM, Vinh Phuc Province, Phuc Yen Town, Ngoc Thanh commune, elev. ca. 152 m, 21 October 2016, Do Van Hai, Trinh Xuan Thanh, DVH 149 (holotype HN, isotypes HN, IBSC)



➤ Merge/split regions

- Merge paragraphs/blocks

Select the regions (or just a part of them) and choose “Merge ‘paragraph’ Regions” and/or “Merge Blocks”

- Split paragraphs/blocks

Select just the region you want to split from the rest and click on “Split ‘paragraph’ Region” or “Split Block”



➤ Merge/split regions

Taxonomic treatment

Cosmianthemum melinhense D.V.Hai, Z.L.Lin & Y.F.Deng, *sp. nov.* (Figs. 2–4)

Type: —VIETNAM, Vinh Phuc Province, Phuc Yen Town, Ngoc Thanh commune, elev. ca. 152 m, 21°23'51.3"N, 105°42'56.8"E, 21 October 2016, Do Van Hai, Trinh Xuan Thanh, DVH 149 (holotype HN, isotypes HN, IBSC).

- Mark Region
- Remove Region ...
- Merge 'paragraph' Regions**
- Revise Block Paragraphs

Taxonomic treatment

Cosmianthemum melinhense D.V.Hai, Z.L.Lin & Y.F.Deng, *sp. nov.* (Figs. 2–4)

Type: —VIETNAM, Vinh Phuc Province, Phuc Yen Town, Ngoc Thanh commune, elev. ca. 152 m, 21°23'51.3"N, 105°42'56.8"E, 21 October 2016, Do Van Hai, Trinh Xuan Thanh, DVH 149 (holotype HN, isotypes HN, IBSC).

- Mark Region
- Remove Region ...
- Split 'paragraph' Region**
- Revise Block Paragraphs
- Split Block



➤ Merge/split annotations

- Merge annotations

Select parts of the annotations and choose to merge them. For example, “Merge materialsCitations”

- Split annotations

Decide where the desired boundary will be, click on the first word of the desired second annotation and choose to split them before. For example, “Split materialsCitation Before”



➤ Merge/split regions

Cosmianthemum melinhense D.V.Hai, Z.L.Lin & Y.F.Deng, *sp. nov.* (Figs. 2–4)

Type:—VIETNAM, Vinh Phuc Province, Phuc Yen Town, Ngoc Thanh commune, elev. ca. 152 m, 21°23'51.3"N, 105°42'56.8"E, 21 October 2016, Do Van Hai, Trinh Xuan Thanh, DVH 149 (holotype HN; isotypes HN, IBSC)

Merge materialsCitations

Find Next '51.3 ... 2016'

Type:—VIETNAM, Vinh Phuc Province, Phuc Yen Town, Ngoc Thanh commune, elev. ca. 152 m, 21°23'51.3"N, 105°42'56.8"E, 21 October 2016, Do Van Hai, Trinh Xuan Thanh, DVH 149 (holotype HN; isotypes HN, IBSC)

- Edit Annotation Attributes ... >
- Copy Annotation Attributes ... >
- Remove Annotation ... >
- Split treatment Before
- Split subSubSection Before
- Split materialsCitation Before

A NEW SPECIES OF *COSMIANTHEMUM MELINHENSE*

Phyto

olia Press 125



➤ **Extend boundaries**

- **Extend annotation boundaries**

Select a part of the annotation and drag the cursor until the desired new boundary, then select to extend it. For example, “Extend bibRef”



➤ Extend boundaries

Hai, D.V., Oanh, P.T., Deng, Y.F., Lin, Z.L., Choudhary, R.K. & Lee, J.K. (2018) *Rungia kholi* (Acanthaceae), a new species from northern Vietnam. *Annales Botanici Fennici* 55 (4–6): 333–337.
<https://doi.org/10.5735/085.055.0417>

Hansen, B. (1985) *Cosmianthemum knoxii* folium (C. B. Clarke) B. Hansen comb. nov. (Acanthaceae). *Nordic Journal of Botany* 5: 195–197.



Hai, D.V., Oanh, P.T., Deng, Y.F., Lin, Z.L., Choudhary, R.K. & Lee, J.K. (2018) *Rungia kholi* (Acanthaceae), a new species from northern Vietnam. *Annales Botanici Fennici* 55 (4–6): 333–337.
<https://doi.org/10.5735/085.055.0417>

Hansen, B. (1985) *Cosmianthemum knoxii* folium (C. B. Clarke) B. Hansen comb. nov. (Acanthaceae). *Nordic Journal of Botany* 5: 195–197.

- Edit subsection Attributes
- Remove subsection Annotation
- Extend bibRef
- Mark Caption
- Mark Page Header
- More Annotations



➤ **Set text stream type**

- **Select the string, click on “Set Text Stream Type” and choose the correct one. The main types are:**
 - **mainText:** all the main parts of the document, as head, abstract, introduction, materials, results, discussion...
 - **pageTitle:** page headers and/or footers, containing journal name, volume, year, publisher, page number...
 - **footnote:** page footers containing information about something in the main text
 - **caption:** caption of tables or images
 - **label:** text inside images or graphics
 - **table:** text inside tables



➤ Set text stream type

The image shows a screenshot of a text editor with a context menu open over a text stream. The text stream is highlighted in blue and contains the text: "A NEW SPECIES OF COSMIANTHEMUM". The context menu is divided into two sections. The top section contains several "Mark" options, each with a colored background: "Mark Caption" (magenta), "Mark In-Line Caption" (green), "Mark Footnote" (orange), "Mark Table Note" (cyan), "Mark Page Header" (blue), "Mark Parenthesis" (grey), and "Mark Artifact" (dark grey). The bottom section contains several "Set" options: "Set Next Word Relation", "Set Previous Word Relation", "Cut Stream Before", "Cut Stream After", "Click Predecessor", "Click Successor", "Make Stream", "Set Text Stream Type" (highlighted in blue), and "Set Text Direction". To the right of the "Set Text Stream Type" option is a secondary menu with a list of text stream types: "artifact", "caption" (selected with a blue dot), "deleted", "footnote", "label", "mainText", "pageTitle", "table", and "tableNote".

FIGURE 1. Map showing the type locality of *Cosm*

Taxonomic treatment

Cosmianthemum melinhense D.V.Hai, Z.L.

Type: VIETNAM, Vinh Phuc Province, Phuc Y

October 2016. Do Van Hai, Trinh Xuan Thanh

A NEW SPECIES OF COSMIANTHEMUM

- Mark Caption
- Mark In-Line Caption
- Mark Footnote
- Mark Table Note
- Mark Page Header
- Mark Parenthesis
- Mark Artifact
- Set Next Word Relation
- Set Previous Word Relation
- Cut Stream Before
- Cut Stream After
- Click Predecessor
- Click Successor
- Make Stream
- Set Text Stream Type
- Set Text Direction

- artifact
- caption
- deleted
- footnote
- label
- mainText
- pageTitle
- table
- tableNote



➤ **Mark captions and other annotations**

- **Mark captions**

If they are not already marked, select the entire region for the caption and click on “Mark Caption”

- **For page headers or footers -> Select “Mark Page Header”**
- **For footnotes -> Select “Mark Footnote”**
- **For tables -> Select “Mark Table”**
- **For table notes -> Select “Mark Table Note”**

P.S: This tool adds the annotation but also fix text stream types automatically



➤ Mark captions and other annotations

The image illustrates the process of marking text elements in a document. It shows three examples of text with context menus:

- Figure Caption:** The text "FIGURE 1. Map showing the type locality of *Cosmianthemum melinhense*" is highlighted. The context menu includes "Mark Region", "Remove Region ...", "Split Block", "Mark Table", "Mark In-Line Table", "Mark Caption", and "Mark Page Header".
- Taxonomic Treatment:** The text "Taxonomic treatment" is highlighted. The context menu includes "Mark Table", "Mark In-Line Table", "Mark Caption", and "Mark Page Header".
- Species Name:** The text "*Cosmianthemum melinhense* D.V.Hai, Z.L.Lin & Y.F.Deng, sp. nov." is highlighted. The context menu includes "Mark Caption" and "Mark Page Header".
- Page Header:** The text "132 • Phytotaxa 538 (2) © 2022 Magnolia Press HAI ET AL." is highlighted. The context menu includes "Split Block", "Mark Table", "Mark In-Line Table", "Mark Caption", "Mark Page Header", "Make Stream", "Set Text Stream Type", and "Copy Text".

A legend on the right side of the image shows the color coding for the marking options:

- Mark Caption: Magenta
- Mark In-Line Caption: Light Green
- Mark Footnote: Yellow
- Mark Table Note: Cyan
- Mark Page Header: Blue



➤ **New Annotation**

- **To create a new annotation, simply select the whole text that you want to annotate and click on 'Annotate'**

If the annotation already exists and is checked in the display control you can just select it in the list that appears

If not, select 'Annotate' again and manually add the new annotation (check if the spelling of the word is correct)



➤ New Annotation

...ams. Because of its narrow distribution with an estimated population
to be Vulnerable (VU) following the IUCN Red List Categories and Cri
e needed to find add
ells more about the fl
e necessary in the fu
Paratypes)—VIET
05°42'41.3"E, 27 Ja
2"E, 25 January 201
January 2018, Do Va
021, Do Van Hai, Ng
is allied to *C. guang*
& H.S.Lo) H.S.Lo] in
and fruits. However, it differs from *C. viridiflorum* in having ellipt

- Annotate
- Edit Annotation Attributes ...
- Remove Annotation ...
- List 'Vulnerable (VU)' ...
- Mark Caption
- Mark Table Note
- Mark Page Header
- Set Text Stream Type
- Copy Text
- Show XML View ...
- More ...

- Annotate ...
- bibRef
- caption
- collectingMunicipality
- location
- materialsCitation
- taxonomicName
- taxonomicNameLabel

Enter Annotation Type

Enter or select type of annotation to create

DOI *

OK Cancel

- DOI|
- DOI
- accessDate
- author
- bibRef
- bibRefCitation
- bookContentInfo
- caption
- collectingCountry

***Make sure there are no typos**



➤ **Annotation attributes**

- **You can always 'Edit Annotation Attributes'**

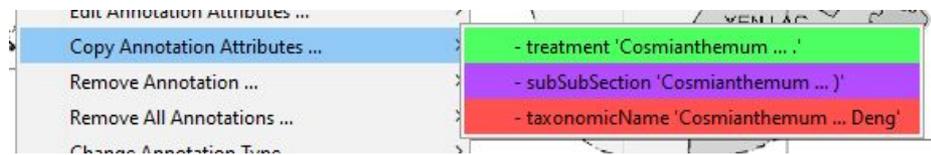
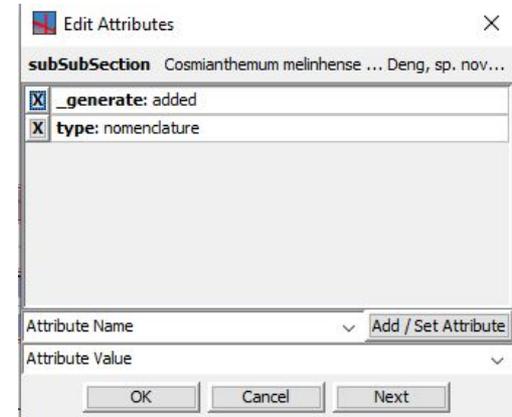
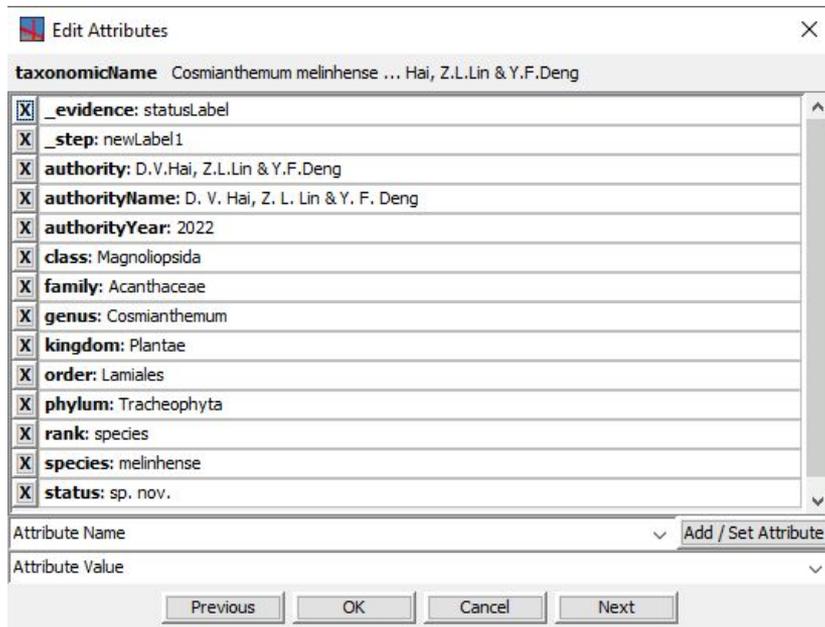
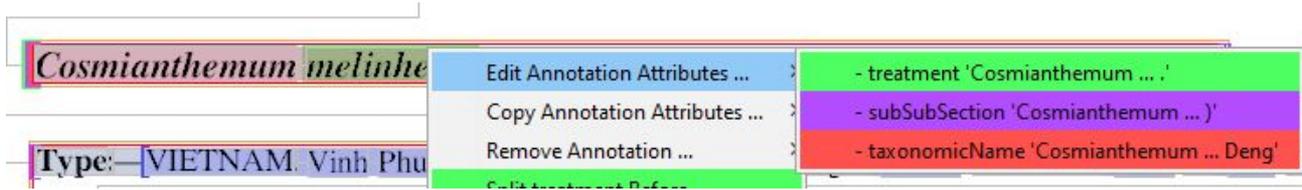
Select the type of annotation you want to edit. Only those that are toggled on in the display control will be available to edit

- **Option to copy attributes**

You can copy the attributes from an annotation of the same type and edit it afterwards



➤ Annotation attributes



➤ **Annotation boundaries**

- **Make sure the boundaries are correctly delimited**

Expand, split or merge annotations

Always check if paragraphs are correct

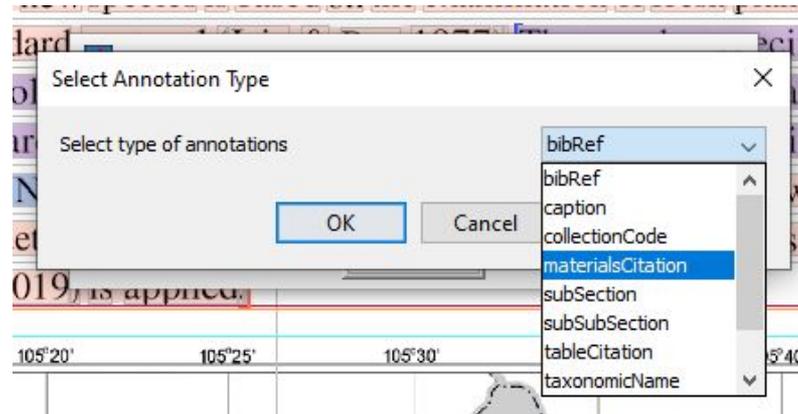
Attributes may also be erroneously assigned depending on the way the boundaries were set



➤ Remove annotations

- Select 'Edit -> Remove Annotations' and choose which one you want to remove from the document

It will remove all the annotations of that type present in the document



➤ Naming documents

- Use abbreviated names of journals, followed by volume, issue and pagination.

It depends on each journal

PapAvZool.60.e20206039.pdf

RafflesBZool.68.369-378.pdf

FarEastEntomol.402.1-36.pdf

PersJourAcarology.9.1.67-81.pdf

Candollea.75.2.241-244.pdf

TheColeopBull.74.4.367-646.pdf

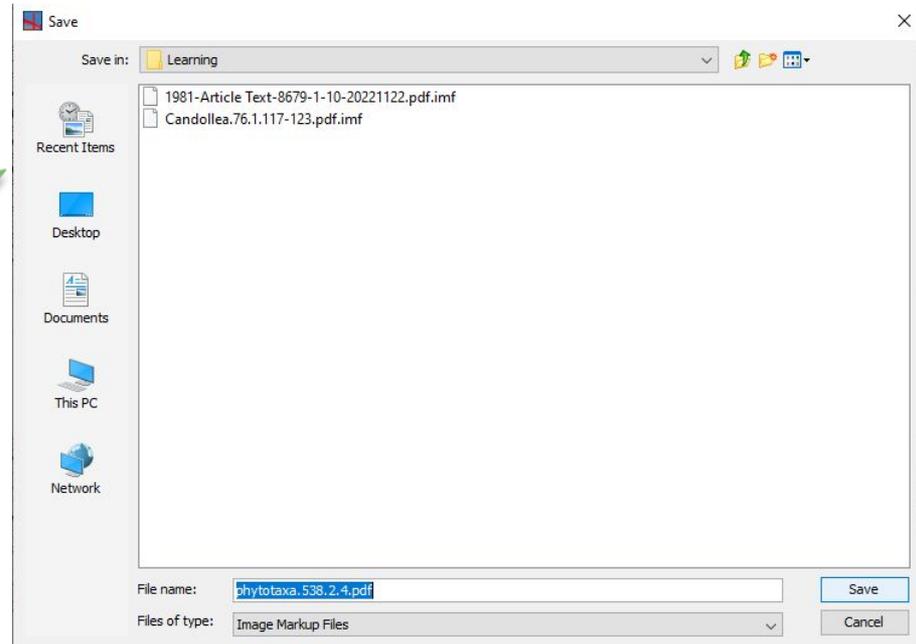
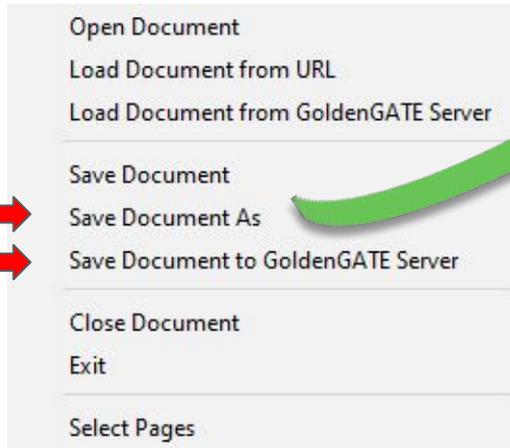
ActaZoolAcadSciH.66.1.23-33.pdf



➤ Saving a file

- “File” -> “Save Document As” to save as IMF file
- “File” -> “Save Document to GoldenGATE server” to save straight to Plazi server

OR





PLAZI

TAKING CARE OF FREEDOM



<http://plazi.org>



@plazi_ch



/company/plazi



info@plazi.org