IAL10 – Excursion 3 – Classical Karst

Field guide for lichen species list

Introduction to the Classical Karst

The Classical Karst together with the Dinaric Karst represent the largest continuous karst surface in Europe and is among the largest karst surfaces in the world. It belongs to the Unesco World Heritage. The Classical Karst covers the area between the Ljubljana Marsh (Slovenia) and the Bay of Trieste (Italy) and counts around 6,000 known and explored caves. The geological strata of the Classical Karst comprise Triassic, Jurassic and Cretaceous limestone and dolomites, and Palaeocene and Eocene limestone to a lesser extent. The bottoms of poljes (large flat plains) are backfilled by Quaternary alluvium from rivers and streams. The geomorphology of the Classical Karst strongly reflects the tectonic processes. The area of the Classical Karst has an extremely diverse relief. The higher relief in the central area comprises high karst plateaus that drop off in cascades into lower-lying karst plateaus or poljes. Rivers that spring from non-carbonate rocks disappear at the contact with the karst landscape and form blind valleys or cross the karst via karst valleys and gorges. Numerous extensive and complex cave systems were formed by the disappearing streams and are connected to the surface by numerous shafts. Fluvio-karstic phenomena such as dry valleys are frequent on the dolostone basement. Karst rivers appear only at the bottom of poljes, such as the Vipava valley (https://whc.unesco.org/en/tentativelists/6072/).

There is not a lichen species list for the areas that will be visited. Lichen species which will likely be collected during the excursion can be determined using the key of the lichens of the Classical Karst (including ca. 660 infrageneric taxa; https://dryades.units.it/home/index.php?procedure=ext_key_home&key_type=lic&key_id=51) and the key of the lichens of Italy (including 3553 infrageneric taxa; https://dryades.units.it/home/index.php?procedure=ext_key_home&key_type=lic&key_id=1692) which have been developed in the past decades.

How to download the lichen keys on your smartphone

Step 1 - Download the KeyToNature App.

The KeyToNature App is available for free for iOS and Android Operating Systems. Access either Apple Store or Google Play and install the app.

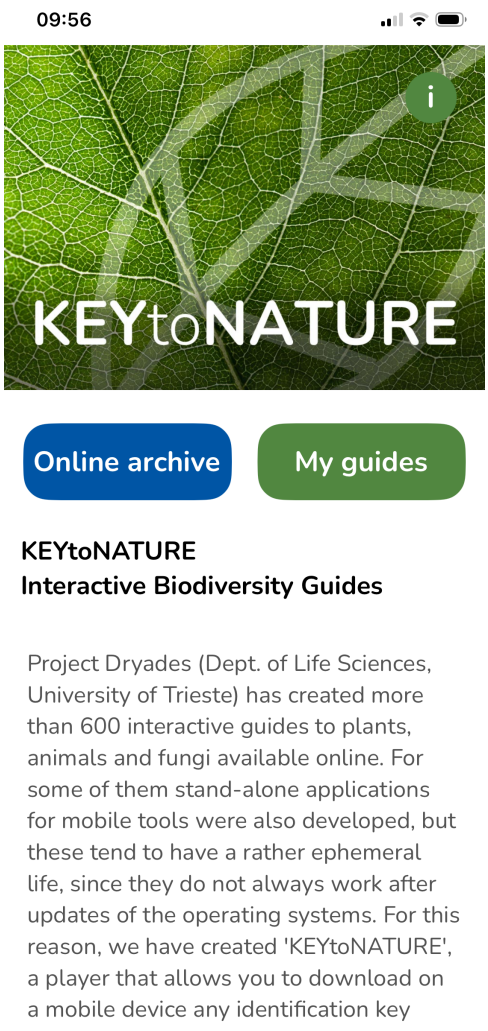
The App allows you to search among the different guides that were developed in the framework of the Project *Dryades*. Once you find a guide you are interested in, you can download it and store it on your smartphone, so that you are able to use it also offline.

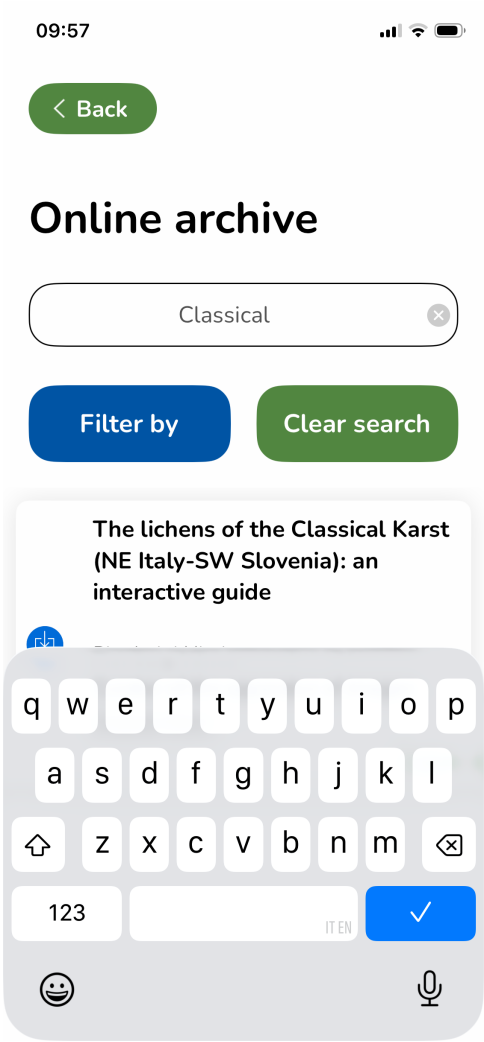
Step 2 - Look for the two guides.

Start the App, and look for the two guides:

- The lichens of Northern Italy - An interactive guide
- The lichens of the Classical Karst (NE Italy-SW Slovenia): an interactive guide

To do this, click the button “Online Archive” in the main screen of the app, and wait a minute for the catalogue to be loaded. Then enter a string in the form. This will list all the guides which title matches the string.



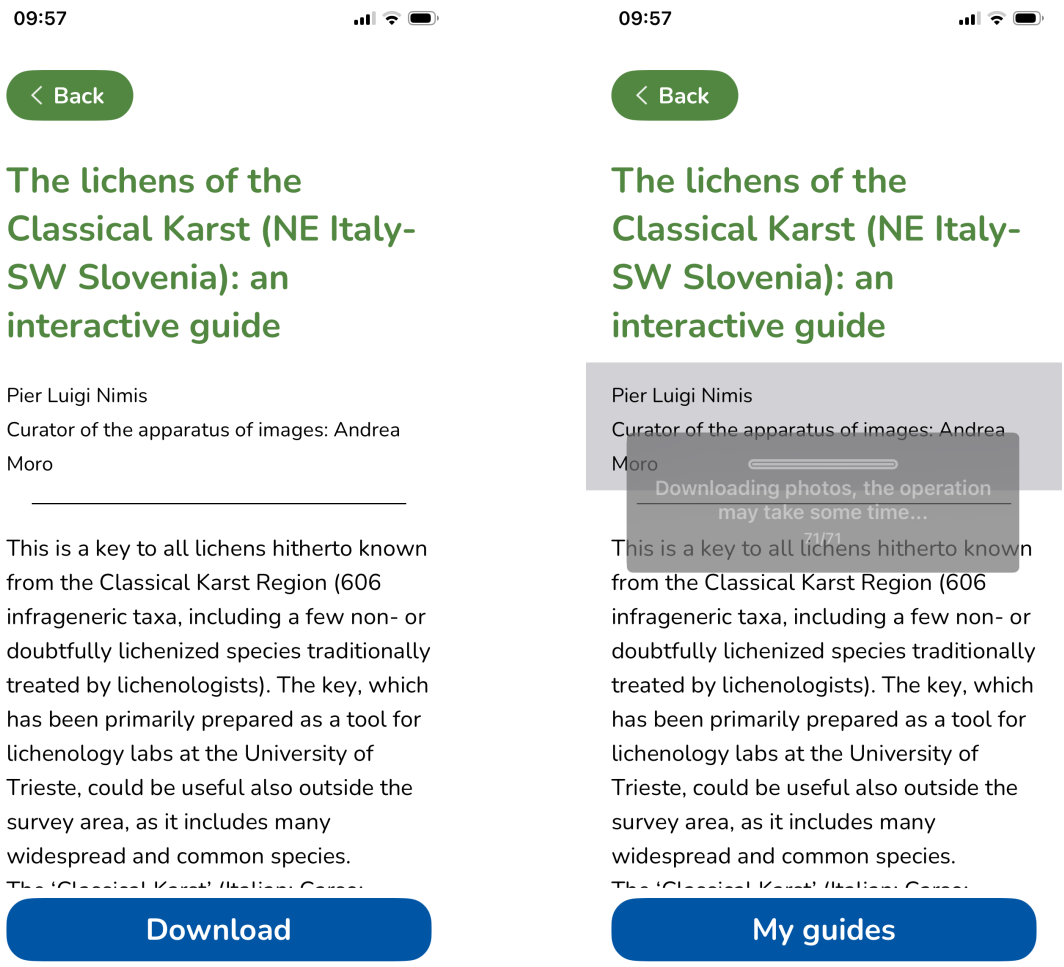


Step 3 - Download

Clicking on the name of the guide, you will see some information and will be able to download it by clicking on the button “Download” at the bottom of the screen.

As during the download process all the images which are present in the guides (one image per each taxon, plus images of characters used in the identification process) will be stored on your smartphone, it is advisable to perform the download while you have access to a wifi network. Be aware that, even if the size of the images is relatively small, the complete amount of data which downloaded is relatively big (a total of ca. 400 Mb for both of the keys).

Once the download process has begun, a pop-up widget will show you the overall progress.

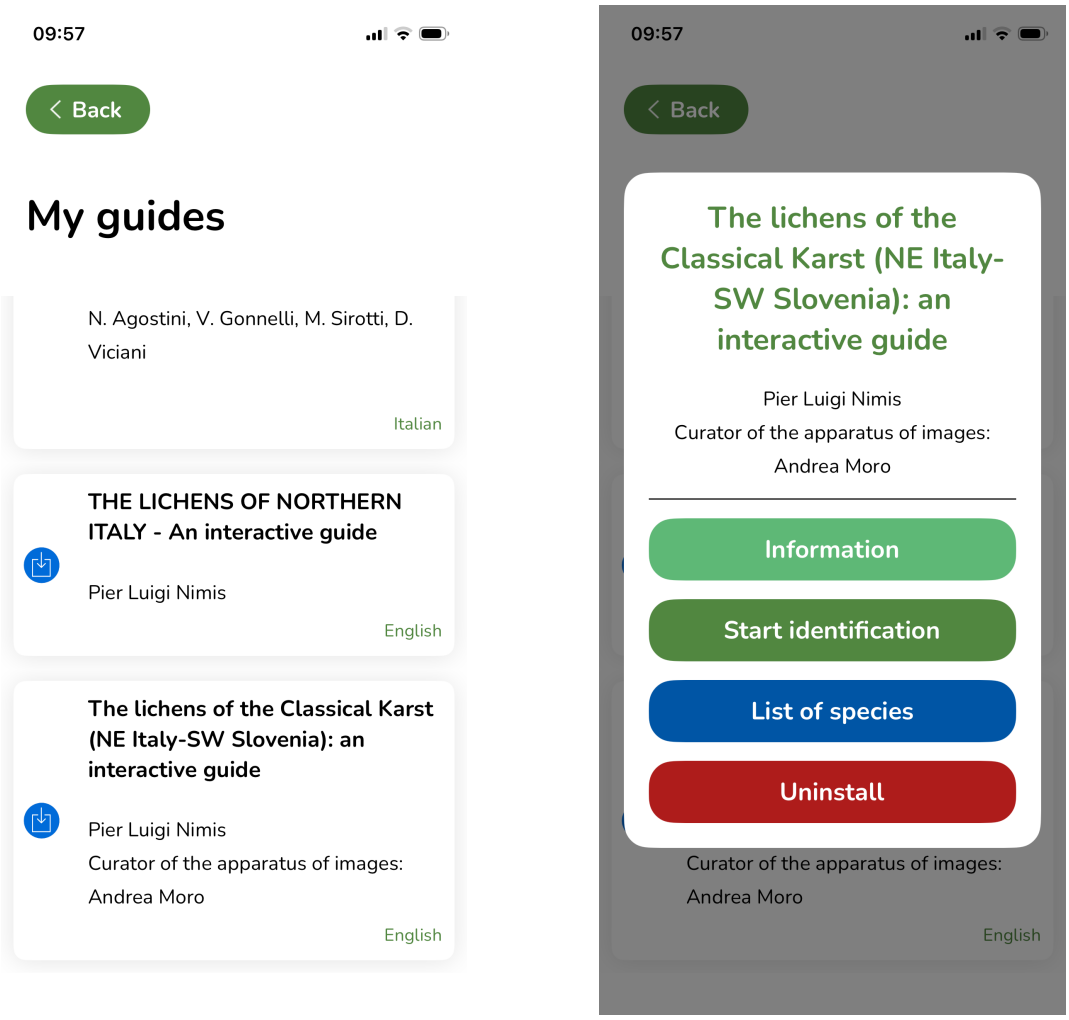


Once the download is completed, click on the button “My Guides” to access the guides you have downloaded, or the button “Back” at the top if you want to download another guide.

Step 4 - Use of the guides

The use of the guides is quite straightforward.

To access a guide, select it from the “My Guides” section of the App. Clicking on the guide name give access to several options: Information on the guide (including survey area and some literature), List of species (the complete list of taxa included in the guide; for each scientific name the user can directly access the corresponding taxon page), a button to uninstall the guide, a button to begin the identification process.



The guides are built as dichotomous identification keys.

For each taxon, the guide provides the scientific name (updated to the last nomenclatural backbone of the Italian Checklist, available on ITALIC, the information system on Italian lichens, http://italic.units.it), an image, and a short description.

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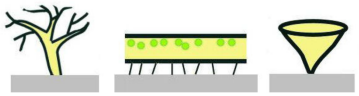
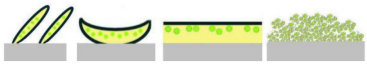
The lichens of the Classical Karst (NE Italy-SW Slovenia): an interactive guide

606 Remaining taxa



Thallus fruticose (with green algae) or foliose



Thallus squamulose, crustose, leprose (or microfruticose with cyanobacteria)

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The lichens of the Classical Karst (NE Italy-SW Slovenia): an interactive guide

34 Remaining taxa | Generate Key

Teloschistes chrysophthalmos (L.) Th. Fr.

Thallus orange, K+ red

Thallus not orange

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Teloschistes chrysophthalmos (L.) Th. Fr.

Description: Thallus fruticose, tufted, often forming loose cushions to 3(-4) cm high, attached by a basal holdfast, bright orange (yellow to grey in shade-forms). Branches at first stellate-radiate and c. 0.5 mm wide, but soon becoming erect, of variable width (usually 1-2.5 mm), rigid, slightly dorsiventral, usually with ciliate tips, smooth or weakly