

Arrowcrab Photographer User's Guide

Version 2.2

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Arrowcrab Photographer is the photo edition of ArrowCrab AI Dive Studio: the same engine, focused purely on your underwater pictures and videos — photo collections, the viewer, underwater color correction, AI marine life identification, slideshows and video tools. It has no dive-log features. Project files are fully interchangeable with the other Arrowcrab apps: a project saved here opens complete in ArrowCrab AI Dive Studio (including any dives it already contained — they are simply not shown here).

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1. Overview

Arrowcrab Photographer organizes your underwater pictures and videos in photo collections. Everything is stored locally on your computer in project files (.db) — no accounts, no cloud.

Starting up: the start screen shows for about two seconds, then the app goes straight to work — your default project if one is set (section 2), otherwise a fresh new project. Photo Collections is the app's one main view.

In the header title bar:

- click the circled ? after the title to open this guide
- click the "Arrowcrab Photographer" title for the About box (version, author, contact)
- hover over the ArrowCrab logo for "Ask ArrowCrab AI" — a chat about the current project (needs an API key, section 10)

2. Projects (Saving and Loading)

A project is one .db file holding everything: picture lists, captions, marine IDs, collections, settings.

```
Save Project      first save / "save as" with a name
Quick Save        one click back into the current file
Load Project      open an existing project
New Project       start fresh
Default project   Settings > set current project as default; it
                  loads automatically at startup
```

Save location — local or cloud
When you save, a "Save Location" chooser appears first (only if a cloud drive is detected on this computer): the app's own projects folder, or a cloud folder (iCloud Drive, Google Drive, OneDrive, Dropbox). A cloud folder makes the project reachable from your phone and other computers signed into the same account.

On every project load the app rescans each collection's picture folders: files you added on disk appear, files you deleted are removed. (Folders that are missing — e.g. an unplugged drive — are left alone, and inventories added on a different device are never touched.)

Project files live in the "projects" folder — next to the app on Windows, in ~/Library/Application Support/ArrowcrabPhotographer on macOS. Closing the app prompts you to save unsaved changes.

Projects are interchangeable with the other Arrowcrab apps — any dive-log data a project already contains is preserved untouched, just not shown here.

3. Photo Collections

A photo collection is a group of pictures and videos with a name, a date range, and a description. The Photo Collections table lists every collection with links you can click:

```
Name badge                opens the collection's thumbnails
Inventory / Collections   direct links to the collection's
```

```
                          picture inventory (📂) and each named
                          sub-collection (📷) — with counts
Pictures / per-type counts  open the thumbnails, optionally
                          filtered to one file type
Action icons              📷 add pictures, 📂 browse, ☐ edit
                          name/dates/description, 🗑 delete
```

➕ Add Photo Collection creates a new collection and immediately asks for its pictures. New collections are named "Photo Collection" (then "Photo Collection 2", and so on); use ✎ to rename.

☐ Quik Edit (next to Add Photo Collection) is the fastest way to edit a single picture: it opens your picture gallery directly — the Photos library on iPhone, a file picker on Mac/Windows — and the picture you pick opens straight in the viewer (section 5) with color fix, crop, and save available. Quik Edit picks are kept in a "Quick Edits" photo collection so the originals and saved copies stay findable.

On the iPhone, pictures always come from the Photos library — no folder browsing.

4. Pictures & Videos

Add pictures with the 📷 icon or when creating a collection — on Mac/Windows a popup asks whether to add a whole folder or pick individual files. Supported:
Photos : PNG, JPG, JPEG, GIF, WebP, BMP, TIFF, HEIC

```
RAW    : ORF, CR2, CR3, NEF, ARW, DNG (converted automatically)
Video  : MP4, MOV, MPEG, AVI, MKV
```

Collection dates auto-fill from the picture timestamps when empty. The thumbnail grid supports paging, select/deselect, filtering by file type, random selection, captions, "Update Inventory" to remove deselected files from the collection, and "Refresh Inventory" to rescan the inventory's folders on disk — deleted files are removed, counters update, and NEW files are added (jpg/png photos and mp4/mov movies newer than the newest picture already there, so files you removed on purpose don't come back). The colored file-type counts on an inventory line (e.g. "39 orf") open the grid filtered to just that type.

If the collection already has an inventory, adding pictures asks whether to ADD the new files or REPLACE the inventory (named sub-collections are kept either way). When adding, files already in the inventory are skipped automatically.

Sharing a project between devices: save it to a cloud folder and open it on another device — each device keeps its own inventory for the same collection, and every picture remembers which device added it (🍎 Mac, 📱 iPhone/iPad, 💻 Windows, ☁️ shared cloud folder). One device can never drop another device's pictures.

5. The Picture/Video Viewer

Click any thumbnail (or use Quik Edit) to open the full-screen viewer. Navigate with the on-screen arrows or Left/Right keys; Esc closes.

Top bar: Keep checkbox (uncheck to discard on exit) and caption box.

Buttons (photos):

Identify Marine Life	AI species identification (needs API key)
View Marine ID	review a saved identification
🌊 Color Fix	underwater color correction (section 6)
🎚 Adjust	sliders: correction strength, brightness, exposure, sharpness, saturation, hue, B&W
💾 Save JPG	save a full-resolution copy (corrected / adjusted when active; RAW always available)
✂️ Crop	drag a selection, save it as _cropped.jpg
Set Background	use this photo as the dashboard background
🗑 Delete Media	remove from the collection AND delete the file from disk (confirmation with "don't ask again" option)

Buttons (videos):

🌊 Color Fix	corrected preview (re-encoded, cached)
🎚 Adjust	live brightness/exposure/saturation/hue/B&W; sharpness and strength apply on save
💾 Save MP4	save as MP4 (lossless copy, or re-encoded with correction/adjustments)
🎬 Publish	adds a 4-second title screen in front of the movie and saves it
🗑 Delete Media	same as photos

Zoom (photos): mouse wheel zooms at the cursor, up to 800%. Use the − / % / + buttons bottom-right, double-click for 2.5x, drag to pan, keys + - 0. Zoom resets when you change pictures.

Rotate (photos): the ↻ button bottom-right (or the R key) turns the picture 90° clockwise per click; Save JPG writes the rotated image. Starting a crop clears the rotation first.

Where saved media goes: saved images are written as JPG. On macOS the save dialogs open in your Pictures folder by default (Windows keeps the Desktop). On iPhone, saved JPGs, marine-life overlays, published videos and concatenated videos are added to the Photos app automatically — the first save asks for permission.

6. Underwater Color Correction & Adjustments

🌊 Color Fix restores the reds lost at depth (red-channel compensation, white balance, contrast stretch). RAW files are re-developed from sensor data at 16-bit depth for the best result. Each photo/video remembers its own corrected/uncorrected state, and that state is saved in the project.

🎚 Adjust opens the adjustment panel (it applies Color Fix first automatically). Sliders update the image live:

Color Fix	0–200% (blend from original to beyond-full correction)
Brightness	-100 to +100
Exposure	-2 to +2 EV
Sharpness	0–200% (videos: visible in saved output)
Saturation	0–200%
Hue	-180° to +180° color shift

Black & white checkbox

"Reset All" returns to defaults; "Done" keeps the settings. Toggling Color Fix off always returns the photo to the original.

Corrected/adjusted versions are used automatically in slideshows and marine-ID overlay images, and by 💾 Save JPG / Save MP4 (full resolution, saved next to the original as _corrected / _adjusted).

Settings > "Always Apply Color Fix For Pictures" opens .jpg and .orf pictures with the correction already applied.

7. Named Collections (Within a Photo Collection)

In a photo collection's thumbnail grid, select photos and "Create Collection" to group them under a name (e.g. "Best of", "Turtles"). Named collections appear as links in the Photo Collections table. From there you can open one, run a slideshow from it, identify all marine life in it, copy its files to a folder on disk, or — if it contains only videos — concatenate them into a single movie (with a title screen at the front).

8. AI Marine Life Identification

Uses Anthropic Claude or OpenAI GPT-4o vision (your choice in Settings). Requires your own API key — the app prompts the first time; keys are stored only on your computer.

```
Identify Marine Life    on the current photo in the viewer
Identify All            batch over a whole named collection
View Marine ID          re-read a saved identification
🖼 Overlay Photo        burns the identification onto a copy of the
                        photo (branded "ArrowCrab AI Dive Studio
                        Marine Life ID"), using the color-corrected
                        image when Color Fix is on. Overlays are
                        saved as JPG (on iPhone: into Photos).
```



Example: an Overlay Photo saved by Identify Marine Life (species, description, trip, dive site and photo time burned in)

Identifications save species and context with the project.

9. Slideshows & Video Tools

From a photo collection or named collection you can create:

HTML slideshow	standalone file, arrow keys / space to control
MP4 slideshow	1920x1080 video with title slide, configurable per-photo timing, optional soundtrack (.wav/.mp3/.ogg/.m4a/.aac from the sounds folder)

Photos with Color Fix appear corrected; marine IDs are overlaid automatically.

Video tools (require FFmpeg on Mac/Windows):

Concatenate	join a collection's videos into one file, with a title screen
🎬 Publish	single video with a 4-second title screen

Long encodes run in the background with progress shown — you can keep using the app. Outputs default to the Pictures folder on macOS; on iPhone they also land in the Photos app.

10. Settings

API keys	Anthropic / OpenAI for marine life ID and Ask ArrowCrab AI
Preferred provider	which AI to use
Owner profile	name, contact (appears on the header)
Keep My Data	reuse your owner profile in new projects
Background	choose any photo as dashboard background
Default project	auto-load on startup
Always Apply Color Fix	open pictures already corrected
Thumbnails Per Page	thumbnail grid page size

11. Keyboard Shortcuts (viewer)

Left / Right	previous / next picture
Esc	close viewer (or cancel crop/adjust)
+ / -	zoom in / out
0	reset zoom
R	rotate picture 90° clockwise
Enter	apply crop (while cropping)

12. Troubleshooting

Blank window at startup (Windows)
Install the Microsoft Edge WebView2 runtime: https://developer.microsoft.com/microsoft-edge/webview2/ (macOS uses the built-in WebKit — no runtime needed.)

Video features don't work / "FFmpeg not found"

```
Windows: install FFmpeg with  winget install Gyan.FFmpeg
macOS:   install FFmpeg with  brew install ffmpeg
```

then restart the app.

Windows SmartScreen blocks the app
Click "More info" then "Run anyway" (the app is unsigned).

macOS says the app is from an unidentified developer / "damaged"
The app is unsigned. Right-click (Control-click) the app, choose "Open", then "Open" again. On macOS 15+ approve it under System Settings > Privacy & Security > "Open Anyway". Or clear the quarantine flag once in Terminal: xattr -dr com.apple.quarantine "/Applications/Arrowcrab Photographer.app"

Crash on launch: "Failed to resolve Python.Runtime.Loader.Initialize" Windows blocked the app's files because the zip was downloaded from the internet. Fix: open PowerShell and run (adjust the path to where you extracted the app): Get-ChildItem "C:\ArrowcrabPhotographer" -Recurse | Unblock-File

Pictures missing after moving folders
The project stores picture file paths. If you move a picture folder, re-add it to the collection with the  icon. On load, the app removes entries whose files were deleted (but leaves entries alone if the whole folder/drive is unavailable).

RAW photos slow to appear
ORF/RAW files are converted in the background on first view and cached for the session — the first look can take a few seconds.