



Personal equipment of one of the authors including 2 cameras, macro and wide angle lenses, flash, triggers, difusor, drone, action camera and 360 camera (photo by Cesar Barrio-Amorós).



INTRODUCTION TO PHOTOGRAPHY FOR HERPERS: *some general concepts and advice to improve your skills*

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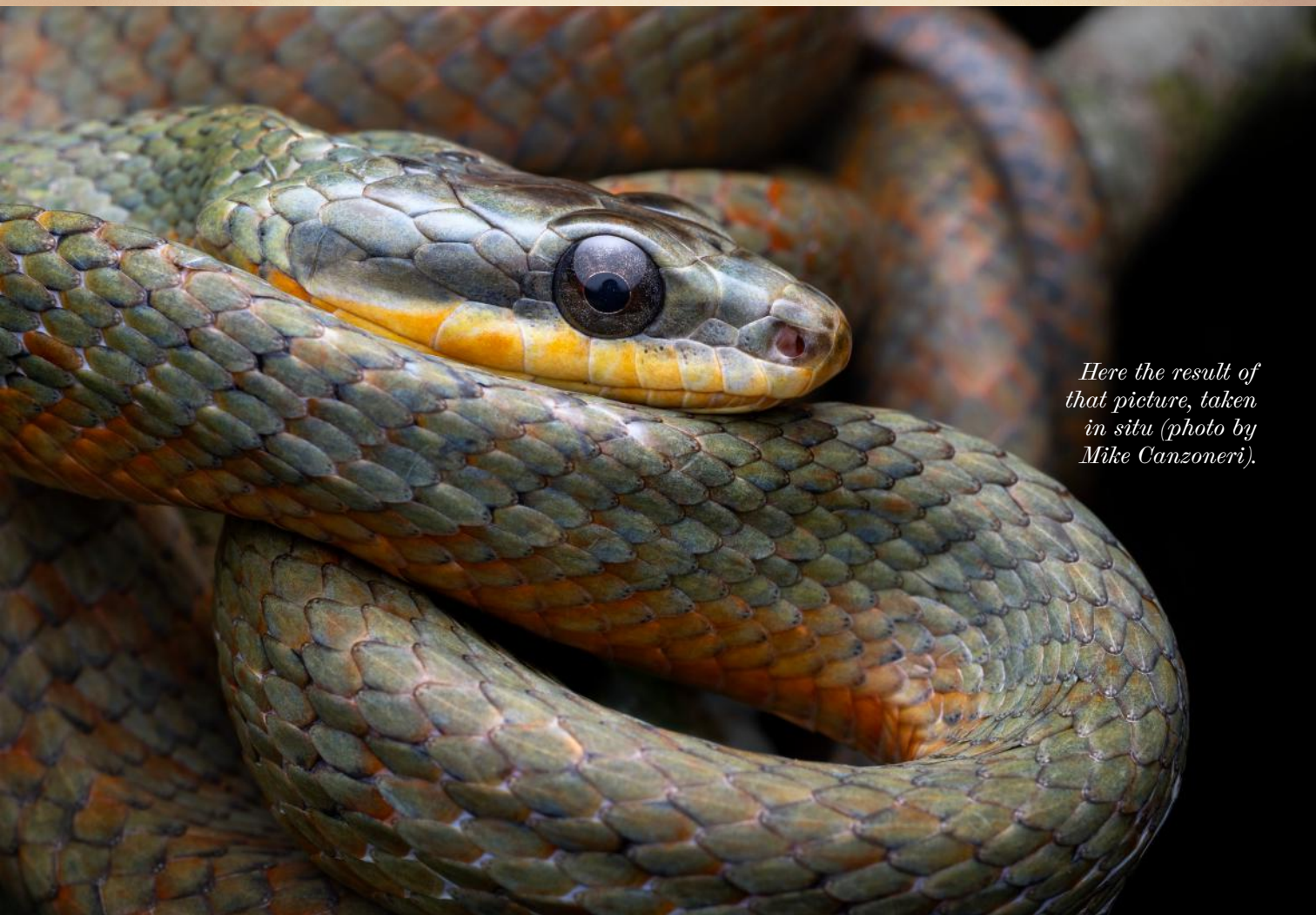
For over a century, nature photography has been the primary way people experience exotic animals from the safe perspective. This is usually in the pages of a book or magazine page. One could, from the comfort of their home, marvel at the beauty of the snow leopard, the majestic flight of the golden eagle, or the impressive face-off between mongoose

and cobra. All of these observations appeared in hand.

Herpetological photography (focused on amphibians and reptiles) initially began with fixed 50 mm lenses and tungsten lighting, often in zoos. The qualitative leap to exclusively capturing images of small animals, such as frogs, salamanders, or small lizards, required the adoption of special macro lenses and suitable lighting.



*Mike Canzoneri taking pictures of a bird snake, *Phrynomax poecilonotus*, using Nikon Z8, Nikkor 50mm f/2.8 macro Z lens, AK diffuser, godox V860 iii flash (photo by Cesar Barrio-Amorós).*



Here the result of that picture, taken in situ (photo by Mike Canzoneri).

Until very recently, however, photography was an almost exclusive domain of a select few who devoted much of their lives to acquiring extremely expensive equipment and learning the techniques of this art/science. Mastery often involved countless courses and books. Remember, not so long ago, photography was analog (see Barrio-Amorós 2023). Only a privileged few managed to publish their work in magazines like National Geographic, Geo, or in encyclopedias, achieving fame on a stratospheric level.

With the emergence of digital photography and the ability to instantly view photos, the cost of photography itself has significantly decreased, though the expense of cameras and their accessories has not. Today, we can take thousands of pictures in a single session and see the results immediately. In the past, however, only a limited number of photos could be taken (a 36-exposure roll of film was expensive to buy and develop), and if you weren't a professional, you wouldn't know how the photos turned out until they were developed.

The revival of herping photography

Today, "herping" can be considered a growing and fashionable recreational activity. More and more people are eager to pick up their cameras to capture images of reptiles and amphibians.

Naturally, there are many ways to approach this, with different types of cameras, a variety of accessories (some of which are quite expensive), and plenty of opportunities depending on the desired subject or model.

Of course, not everyone's talent is the same, and certain photographers stand out in this field. We hope to get to know some of them through the pages of this magazine.

However, there is much more to photography than the equipment in someone's kit bag. No matter how good a camera is, if the user lacks talent and knowledge, the photo might not turn out as expected.

A talented and creative photographer can amaze with photos taken using a simple camera



During a photo tour by AUSTRAL, photographers Ramón and Fortià are using their long teleobjectives in movement to catch a basking turtle (photo by Cesar Barrio-Amorós).

and inexpensive lenses, while someone less skilled may struggle to achieve the same results even with the latest, most expensive camera and lenses costing thousands of dollars.

Appropriate terms for animal photography (specifically herpetological subjects)

There is a growing trend in capturing photographs of animals *in situ*. However, it seems that many people misunderstand the concept or use it vaguely and incorrectly.

What does *In situ* and *In habitat* mean?

In situ is a Latin phrase that literally translates to “in the place.” Taking an *in situ* photograph means that the animal photographed has not been touched or manipulated in any way. The photo is taken by taking advantage of the animal’s original position.

However, it’s acceptable to approach the animal and use different types of lighting. Currently, there’s no widely accepted term

that specifies avoiding all use of artificial lighting and/or not approaching the animal in a way that might disturb it.

A term such as *in situ sine molestus* could be introduced to imply that the animal has not been disturbed in any way—neither by getting too close nor by using flashes or lighting that might provoke unnecessary reactions. Slightly moving a leaf or branch to capture a clearer or sharper photo is also considered *in situ*, as long as it doesn’t bother the animal or cause it to feel threatened, flee, or assume a defensive posture.

On the other hand, if an animal is found in its natural environment but its position isn’t ideal, and manipulation is involved, the photograph loses its untouched status and is instead classified as *in habitat*—that is, taken in its habitat.

All *in situ* photographs are inherently in habitat, but not all in habitat photographs are *in situ*. Of course, after the photograph is taken, the animal should be returned exactly to its original position.



*Here the subject of their interest—a black wood turtle *Rhinochelys funerea* (Cope, 1875) at Sarapiquí river in Costa Rica aken in situ (photo by Cesar Barrio-Amorós).*



*Photographer Cristian Torica approaching slowly to a large male of black spiny tailed iguana *Ctenosaura similis* (Gray, 1831) in Guanacaste, Costa Rica; he is using a Nikon D500 with Nikkor 300mm f4 AFS.*

Do flashes really disturb animals?

In places like Costa Rica, it is common for naturalist guides to prohibit nighttime photography using flashes, under the premise of not disturbing the animals. However, this boils down to common sense and respect (see below for ethical protocols to follow).

It is not the same to take a few photos of a frog with a flash using very soft light and a diffuser, as it is for a swarm of tourists to take hundreds of photos of the same animal without pause and without any control measures (like a diffuser).


In fact, no study suggests that flashes used rationally are harmful to nocturnal animals. Many animals remain undisturbed by a few flashes, while more photosensitive species (like red-eyed tree frogs; *Agalychnis*) simply close their eyes and go to sleep.

Who should handle animals and in what circumstances?

This topic ties directly to the discussion on “Creating ethical protocols for herpetological photography” (see below). Handling animals for photography should first address several questions: How necessary is it to handle the animal? What is the purpose? Is it solely for personal photography, or is it for educational or scientific purposes?

It is also crucial to consider each country’s laws regarding animal handling and who is authorized to do so. For example, in National Parks, animals cannot be touched or disturbed in any way without proper permits (usually limited to scientific purposes). Respecting local wildlife is paramount; photographs should ideally be taken in situ. If handling is necessary (by a permitted scientist, guide, or for rescue reasons), it should be done as quickly and gently as possible to minimize stress on the creature.

Additionally, proper knowledge is essential to identify which animals could be dangerous



Here is the result, taken *in situ*
(photo by Cristian Torica).

if handled—such as large lizards, crocodiles, or caimans that may bite; snakes (particularly venomous ones); and poison frogs, among others. It's equally important to remember that handling amphibians specifically can transmit a myriad of pathogens from dirty hands, which is why amphibian handling must be particularly cautious. Always use nitrile gloves and take great care to avoid harming the animal (to them, we are giants).

Creating ethical protocols for herpetological photography

What we usually want is to take home a memory of a beautiful species we've seen—whether in our garden or in a distant tropical forest. The less specialized the purpose of our photography, the fewer disturbances the animal should experience. Ideally, all photographs should be taken *in situ*.

If there is a valid and logical reason for photographing the animal of interest, and

the necessary permissions are obtained or a scientist or guide with such permissions is present, several key points must be considered:

- **Do not harm the animal in any way.** Although this may seem obvious, when dealing with very small animals, we can easily forget how large and strong we are compared to them, or how delicate their skin is. Geckos and other small lizards, for example, can have their skin severely damaged or even torn entirely. Many small lizards experience stress and can suffer from cardiac arrest after being handled for a while. Amphibians, such as frogs, have moist and highly sensitive skin that can be easily damaged if our hands are dirty, muddy, or sandy. As mentioned earlier, it's best to handle amphibians carefully and use nitrile gloves.
- **Avoid damaging their habitat.** This includes refraining from breaking branches, lowering bromeliads or other plants, or moving rocks without returning them to their original position—all just to capture a better photograph.



Another kind of picture possible to obtain with a long lens is a contralight silhouette, in this case a green iguana, also taken in situ (photo by Cesar Barrio-Amorós).

- **Monitor for signs of stress.** If an animal shows symptoms of stress, begins to look weak, or becomes overly fatigued, it must be left alone immediately—even if the desired photo hasn't been taken. The life of the animal is far more important than any photograph that could be captured.

- **Some animals become accustomed to human presence.** Among reptiles, it's common for turtles, crocodiles, and certain lizards to associate humans with food. Obviously, this will never provide photographs of natural behavior, even if the animals are in their environment. Generally, feeding animals is prohibited in all countries we visited.

- **Research local laws and the status of species of interest.** Some species are so highly protected that even touching them can constitute a serious offense (such as tuataras, Komodo dragons, certain sea turtles, etc.).

Only by obtaining the necessary permits and being accompanied by a local guide or scientist can this be done.

- **Provide accurate and truthful information when presenting photographs.** Misrepresenting the origin or methods behind a photograph will only harm the photographer's reputation. Claiming a photo was taken *in situ* when there are clear signs (which experienced naturalists may detect) of stress or manipulation will negatively impact the photographer's credibility in the long run.

As a summary of everything discussed, we can quote the iconic phrase of the Catalan Society of Nature Photographers: "A great photograph is not worth the life or health of an animal, plant species, or their environment." Their motto is even more concise and powerful: "Life above the pursuit of an image."

To be continued...