Glass Frogs

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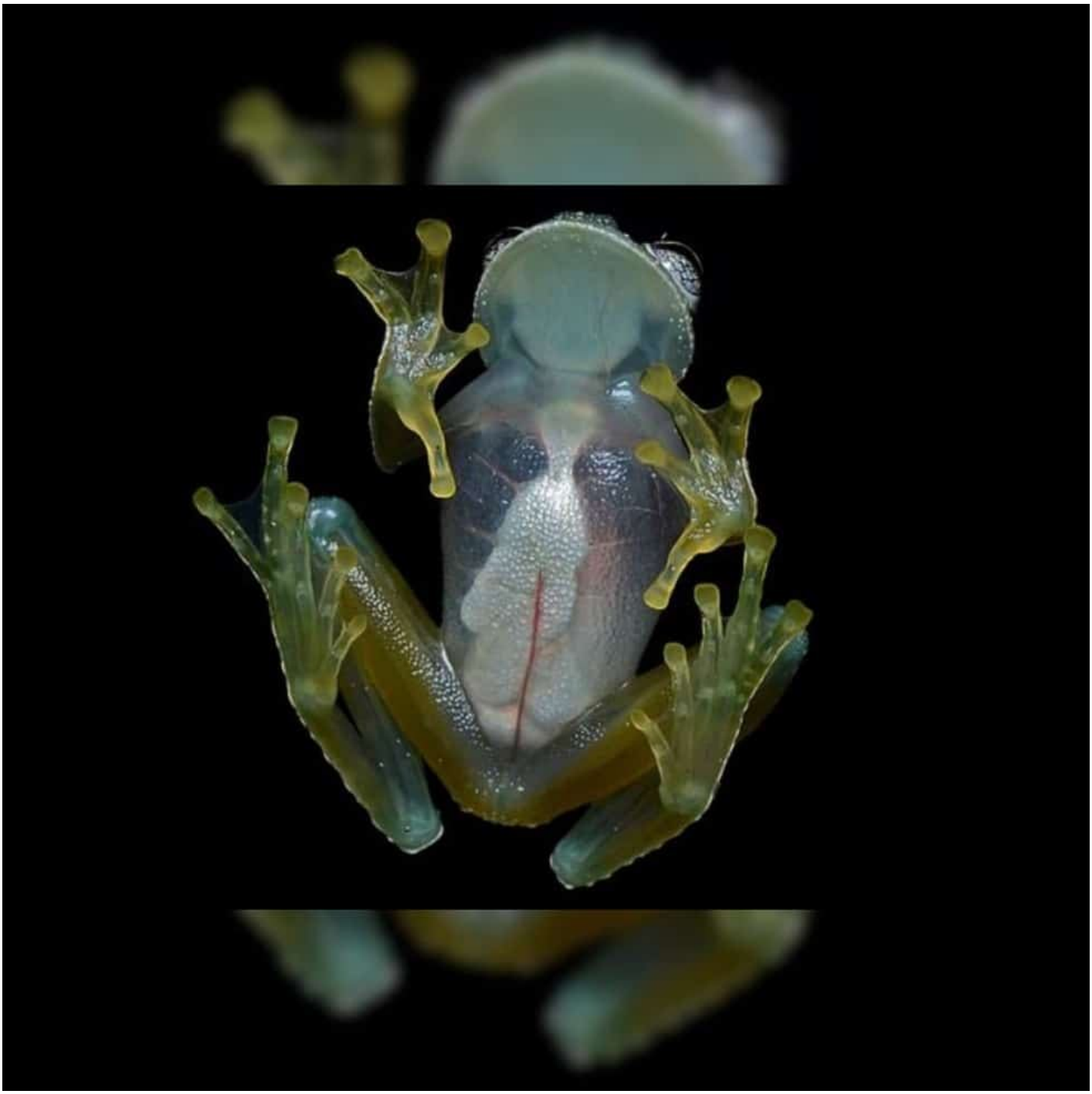

About Glass Frogs:

- Glassfrogs live in the American tropics and are nocturnal amphibians that spend their days sleeping upside down on translucent leaves that match the colour of their backs — a common camouflage tactic.

- Their translucent skin and muscle allow their bones and organs to be visible – hence the name.
- Recent research has proposed that this adaptation masks the frogs' outlines on their leafy perches, making them harder for predators to spot.

How do some animals become transparent?

- Transparency is a common form of camouflage among animals that live in water, but rare on land.
- In vertebrates, **attaining transparency is difficult because their circulatory system is full of red blood cells** that interact with light. Studies have shown that **ice fish and larval eels achieve transparency** by not producing haemoglobin and red blood cells.
- Glassfrogs use an alternative strategy. Resting glassfrogs increase transparency two- to threefold by **removing nearly 90 percent of their red blood cells from circulation and packing them within their liver**, which contains reflective guanine crystals.
- Whenever the frogs need to become active again, they bring the red blood cells back into the blood, which gives the frogs the ability to move around — at which point, light absorption from these cells breaks transparency.

Q1) What is haemoglobin?

Haemoglobin is an iron-containing protein in the blood of many animals—in the red blood cells (erythrocytes) of vertebrates—that transports oxygen to the tissues.

Source: How do some animals become transparent?