KEEPING AND BREEDING OF DRACO MACULATUS IN CAPTIVITY

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Introduction

The genus Draco are a group of lizards from Southeast Asia with the incredible ability to glide long distances (up to 60 m or 200 ft). These lizards are aptly named as the genus name “Draco” derives from the Latin for dragon. Their “wings” are actually specialized rib bones covered with membranous skin. The majority of the time these ribs are folded down flush with the body giving the lizards a well camouflaged twig like appearance. However, when gliding, basking, or communicating with conspecifics these specialized structures can be extended outward dramatically increasing the lizard’s surface area. The different species of Draco, of which there are 41, often have different colors and patterns on their membranous skin which is only visible when extended. In addition, Draco have throat fans which are used by males when communicating with conspecifics. These throat fans are also variably colored between the species. They also have a dramatic and impressive color changing ability. With these incredible adaptations it is no wonder that this genus has long fascinated herpetoculturists. Unfortunately, successfully keeping and breeding this genus has proven to be particularly challenging with many considering them impossible to keep and breed in captivity. Here the author shares his experience keeping and breeding the spotted flying lizard (Draco maculatus) with some success.

Keeping

The author keeps his Draco in vertically oriented terraria that are a minimum of 45 x 45 x 61 cm (18 x 18 x 24 in). All screen enclosures (such as by Zoo Med) and hybrid style enclosures (Leap Habitats) have been used successfully. If all screen enclosures are used then the back and sides should be covered to prevent excessive loss of humidity. Polypropylene corrugated panels (frequently called coroplast) work well for this. A solid sided enclosure also serves the double purpose of visually isolating animals kept in close proximity. Draco are territorial lizards and the author believes that individual housing is a necessity for long term success. Like many other lizards, keeping them communally can generate chronic stress which frequently leads to illness and eventually death. The enclosure can be set up bioactively with a living substrate or with one large potted plant and no other substrate. The author has used Ficus benjamina, Schefflera arboricola, and Sansevieria aubrytiana successfully. Multiple thick branches arranged primarily vertically complete the terrarium. Cork panels can also be affixed to the terrarium sides to increase usable surface area.

Draco are tropical lizards and should be kept accordingly. The author provides his Draco with an ambient temperature of approximately 26 C (80 F). Gradients are very important in herpetoculture and cooler regions

(21 C, 70 F) and warmer (35 C, 95 F) should also be provided in portions of the terrarium. Nightime temperatures of approximately 21 C (70 F) are provided at night. Visible light is provided via a high output LED fixture made by Leap or Arcadia. UV light is provided via a high output T5 fluorescent fixture (5.0 Zoo Med Reptisun, 5.0 Leap, or 6.0 Arcadia have all been used successfully. Heat is provided via a halogen flood bulb in an appropriate dome fixture. Wattage of the halogen bulb will vary depending upon environmental conditions. The author seeks to create a basking spot of 35 C (95 F). The author also provides some seasonal variation in lighting, 14 hours of light in the summer, 12 hours in the spring and autumn, and 10 hours in the winter. This may not be necessary but these are the general parameters provided in the author's facilities.

Hydration is very important for maintaining and acclimating Draco. These are small lizards that dehydrate quickly. A very fine mist created by a MistKing diaphragm pump and misting nozzles is provided at least twice a day during the morning and evening. Occasionally a mid-day misting is also utilized. It is important to allow terrarium surfaces to dry out in between misting sessions to prevent unsanitary conditions. However, Draco seem to thrive in high humidity (70-80% relative humidity during the day and 80-90 % night) with frequent opportunities to drink. The author has never observed Draco drinking from a standing water source but, like chameleons, will drink droplets of water that have collected on leaves and other terrarium surfaces. Reverse osmosis water is used for misting and watering of plants.

It has been proposed in the past that Draco are obligate ant feeders but the author has not found this to be true for Draco maculatus. The author's Draco have all been voracious feeders predating upon any appropriately sized insect. Crickets, fruit flies, bean beetles, mealworms, dubia roaches, silkworms, and black soldier fly larvae are all accepted. All insects are appropriately gut loaded and dusted with either Repashy Calcium Plus LoD or a pure calcium supplement. Draco have a fast metabolism and are fed five out of seven days of the week.

Breeding

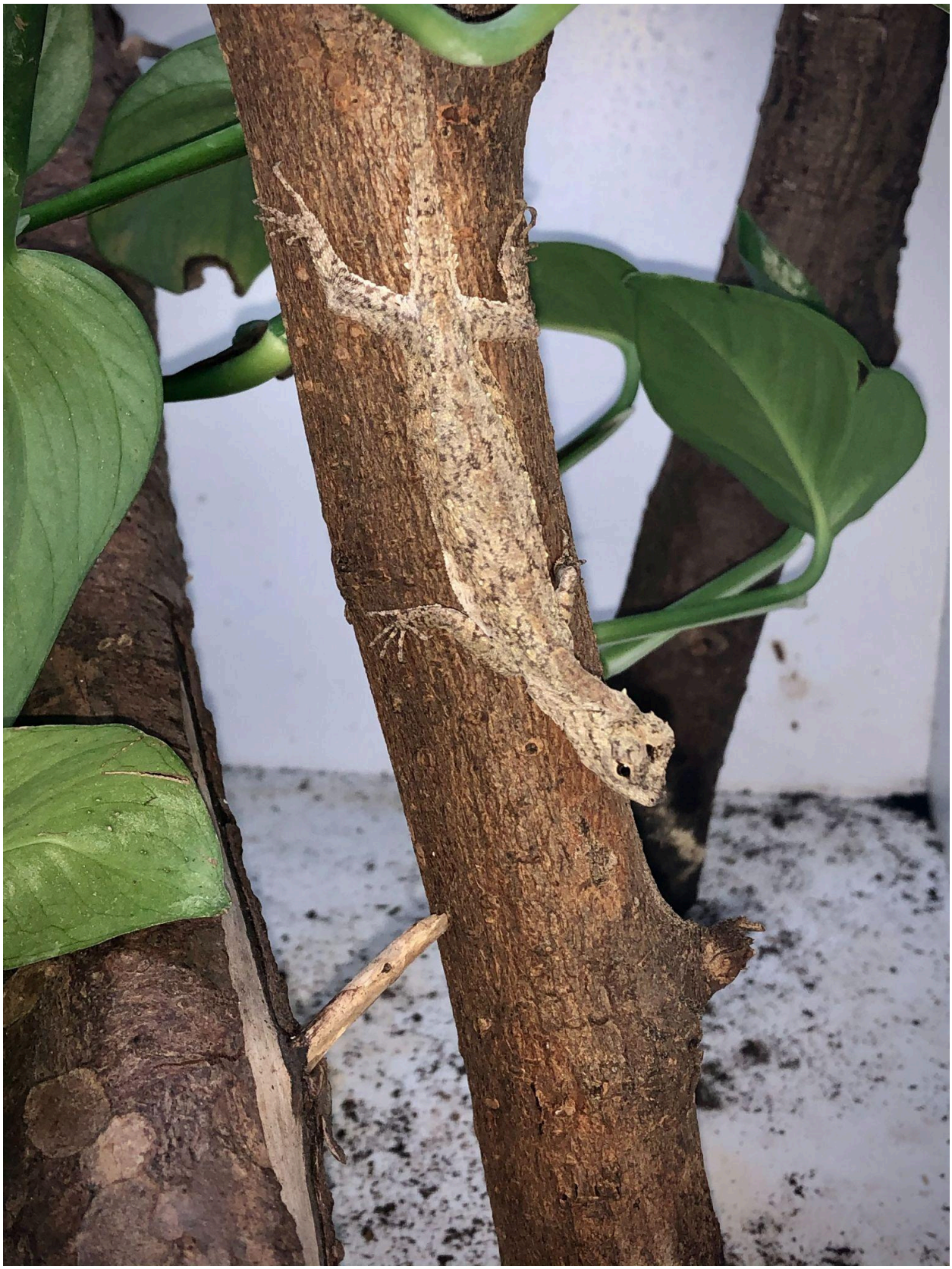
To initiate breeding the author places a female into the male's enclosure. Mating occasionally occurs quickly but usually they wait until the keeper has left their view. The pair is kept together for two to four days then the female is removed to her own enclosure again. After mating, females typically lay four eggs after an approximately thirty day gestation. The female will dig in any slightly damp soil to a depth of approximately 5 cm (2 in) provided and seems to prefer a soil temperature of 25-27 C (78-81 F). Eggs are incubated at those same temperatures and they hatch after approximately 45 days of incubation. The author has incubated at higher temperatures which yielded shorter incubation times but less healthy offspring which did not survive long.

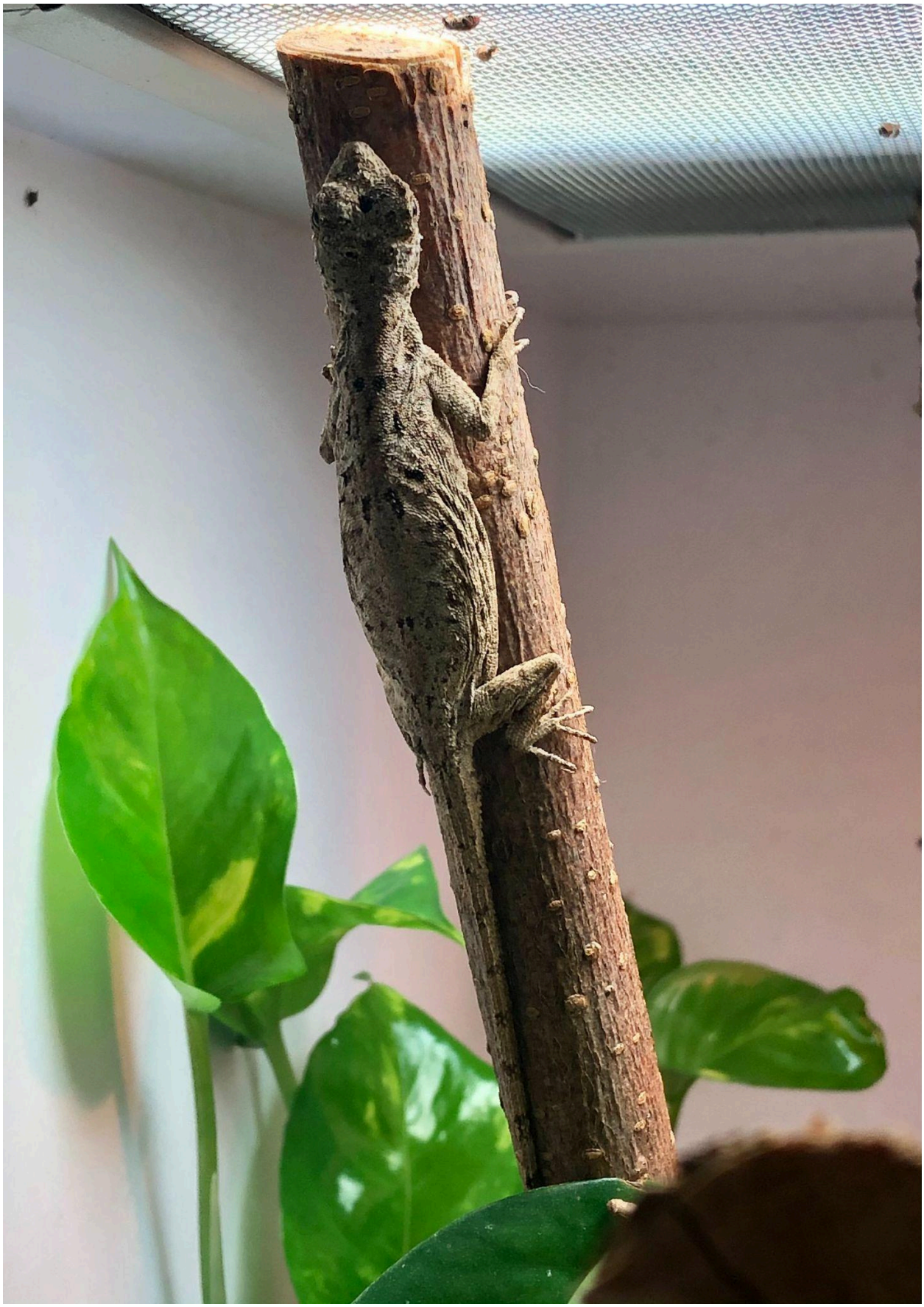
Raising the babies to adulthood has proven to be the most challenging aspect of breeding Draco maculatus for the author. Approximately only 25% of hatchlings have survived to adulthood. In the author's opinion, his rearing enclosures were not adequate (too small, too strong of UV, not enough gradients). In the future the author will use larger enclosures to provide more opportunities for climatic choice.

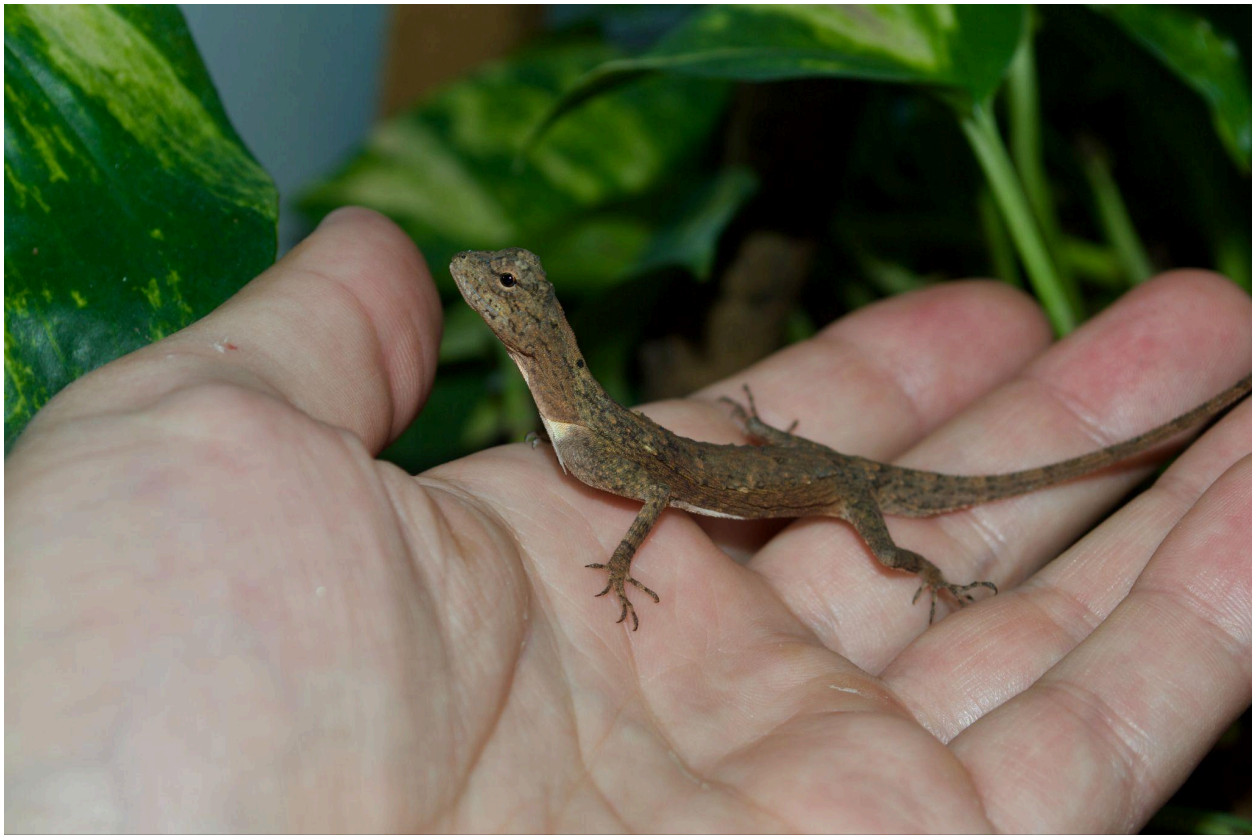
Conclusion

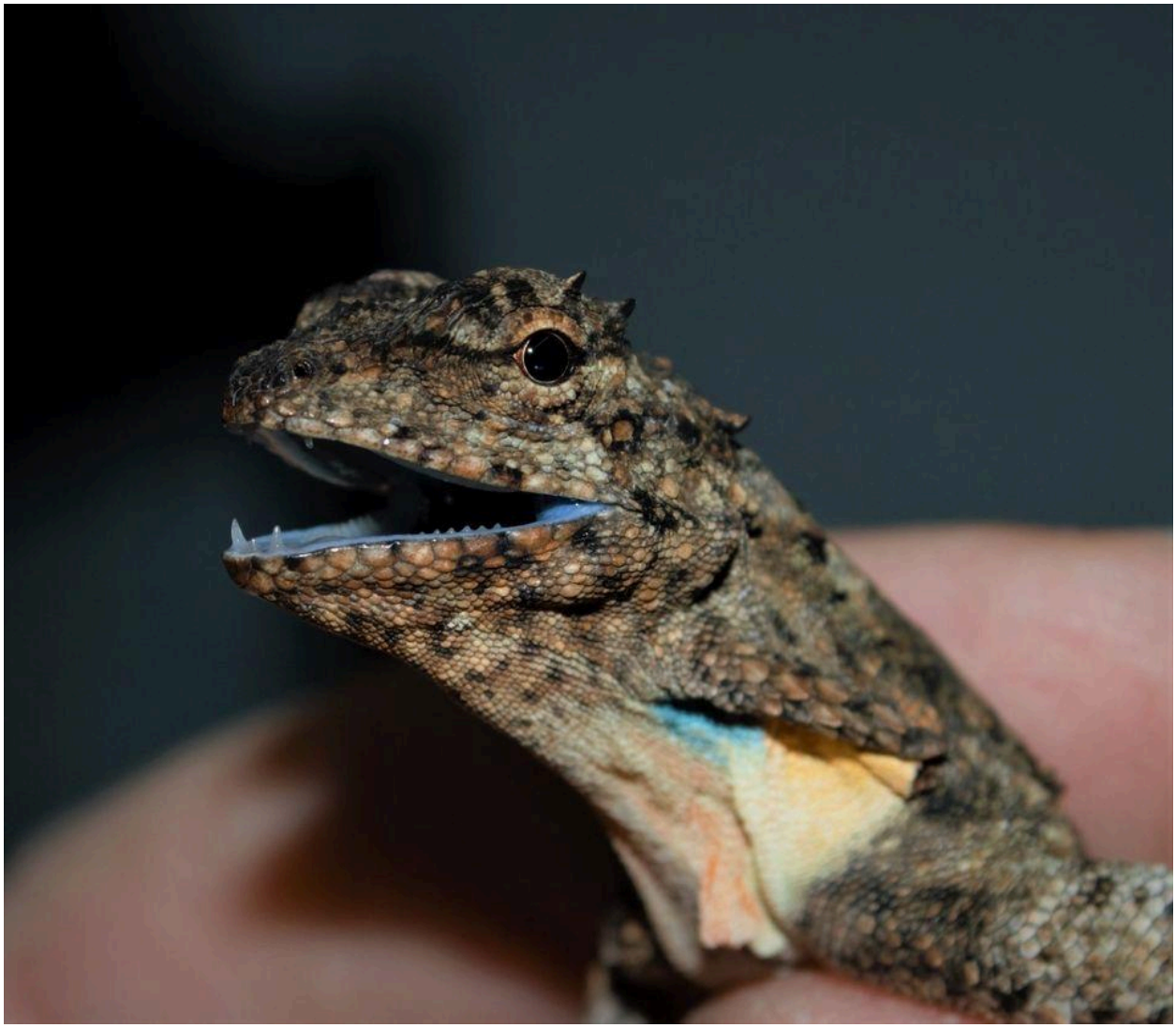
Draco maculatus have proven to be a challenging yet rewarding species to keep and breed. Once acclimated and kept individually, imported animals have proven to be hardy lizards that readily breed readily in captivity. More work still needs to be done to improve the hatchling rearing process but the author believes captive breeding Draco is well within the reach of the experienced herpetoculturist.

Images









Sources

iNaturalist (https://www.inaturalist.org/taxa/31169-Draco)