# Keeping of Australian frilled lizard (*Chlamydosaurus kingii* Gray, 1825*)* at BION Terrarium Center

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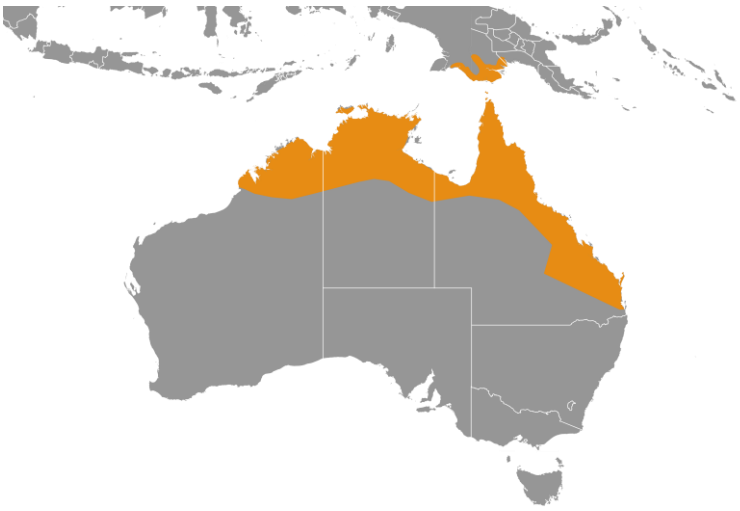
## DESCRIPTION, DISTRIBUTION AND BIOLOGY

*Chlamydosaurus kingii* commonly known as frilled lizards or frillneck gdragons are the most typical representatives of Australian herpetofauna (northern Australia), however they are found also in New Guinea (southern part). These lizards gained their scientific name after named after captain and admiral Philip Parker King (1791-1856), Australian-born British marine surveyor and collector. Common name comes from the large frill around the neck, which usually stays folded against the lizard's body. However when the animal feels attacked or irritated the frill (or “collar”) is raised and dyed, showing the most remarkable colorful part of the body as a sign of aggression. If the combating doesn’t help the lizard tries to escape from the threat using its bipedal locomotion when running. The lizard also opens mouth in such cases demonstrating the teeth. *C. kingii* are considered arboreal species as they spend most of the time on trees, branches and trunks not far from the ground. Rarely these lizards are registered in the lower desert regions of Australia but primarily inhabit humid climates such as those in the tropical savannah woodlands (Wagner, 1980; Savage, 2001). The environment, where they are usually found includes subhumid or semi-arid grassy woodlands and dry sclerophyll forests (Wilson and Knowles, 1988).



Distribution range of *C. kingii* (https://en.wikipedia.org/wiki/Chlamydosaurus)

*C. kingii* is a large lizard, averaging 85 cm (33.46 in) of total length. There are some individuals (males) known to reach the total length of 1 m (39.37 in). *C. kingii* is moderately robust with long limbs and a moderately long tail. The latter one reaches 2/3 of the total length and can be used as a defensive mechanism when the lizard tries to sharply reach the opponent's body during combat. The general coloring of this lizard is grey-brown, sometimes showing yellow-brown or black-brown shades. The tail is obscurely striped with a dark grey tip. The coloration of the frill is a remarkable feature of the two morphs or leneages: the lizards from New Guinea are generally smaller; "Australians or Aussies usually have brighter colors and more variation in body and frill colors, but both New Guinean and Australians can have red, orange, yellow, or black frills and males of both varieties tend to be brighter. Some varieties of Aussies can have brick red or completely brown bodies. Australians also have distinctive white cheeks, and sometimes lose the mottled patterns on their bodies, although this is not always the case. They also can have spots/blotching on the back of their frills. (http://www.rubixreptiles.com/home/new-guinea-vs-australian). The tongue and mouth lining are pink or yellow. The neck frill is simply a thin but extensive fold of skin surrounding the throat, which when fully erected may measure almost 12 inches (30 cm) across. The frill lies like a cape over its shoulders until erected. Frilled lizards are sexually dimorphic with adult males reaching a snout vent length (SVL) of 290 mm (11.41 in), and a mass of at least 870 g. Females are much smaller, reaching a SVL of 235 mm (9.25 in) and a mass of 400g. (Bustard, 1970; https://animaldiversity.org/accounts/Chlamydosaurus_kingii/)

*C. kingii* is a diurnal lizard that spends most of its time resting on tree trunks and low branches and as other reptiles they undergo seasonal changes in their behavior

and activity. During dry season they are characterized by a decrease in activity spending most of the time at rest on large trees with canopy perches. The wet season is characterized by an increase in activity, and the selection of shorter trees with small diameters (Greer, 1989; Wilson and Knowles, 1988). They prey mainly on insects, but their menu also includes small mammals, reptiles, birds, in very rare cases plant food (Swan, 2008).

Frill-necked dragons are not listed in any CITES Appendixes, having IUCN status indicated as LC (Least Concern). They are very popular in herpetoculture and are presented in many private and zoo collections worldwide. Despite the earlier reports that frilled lizard does not survive well in captivity, currently there are many people in the world who breeds them in captivity in multiple generations. Lifespan in captivity is known to be 10 years.

At BION Terrarium Center we work mainly with Australian *C. kingii*, however we had success also with breeding of New Guinean animals.

Some of *C. kingii* from parental stock at BION Terrarium Center.

## KEEPING AT BION TERRARIUM CENTER

### *ADULTS*

**Keeping.** We keep adult *C. kingii* in groups 1.2 or 1.3 (two males should not be kept together) in horizontal terrariums of about 180*60*60 cm (70.86*23.62*23.62 in) with proper ventilation in the front and upper sides. As the animals are young this amount of space is enough for them to feel comfortable and breed, however it is planned to transfer them to bigger vertical enclosures 150*100*200 cm (59.05*39.37*78.74 in). The equipment of the enclosure includes vertical, horizontal and angled branches, water dish, broad 10 l box filled with mix of coarse sand and coconut

substrate that is moisturized frequently acting as a place for eggs laying. Females use it as a place to make clutches. Substrate – mix of coarse sand and clay.

**Lighting**. Lighting period is 12-14 hours during breeding season, with gradual decrease by 3 hours per week till the light is completely switched off for 2 months. We use UVB 10.0 lamps ReptiHeatsun 100W with a simple incandescent lamp to provide a basking spot.

**Temperature.** Ambient temperature should be around +27 - +30 °C (80.6 – 86.0 F) at the day and not lower than +24 °C (75.2 F) at night. At basking place the temperature is about +40 - +45 °C (104.0 – 113.0 F).

**Humidity.** Humidity level is 50-60%. During breeding season we spray the enclosure every day in the morning.

Young male of *C. kingii*

**Water.** Water dish is placed inside a terrarium with regular change of water.

**Diet.** Diet consists of various insects (imago of crickets (two-spotted cricket *Gryllus bimaculatus*, house cricket *Acheta domesticus*, Jamaican field cricket *Gryllus assimilis*), locusts (*Locusta migratoria*, *Shistocerca gregaria*) and cockroaches (Turkestan cockroach *Shelfordella tartara*) of appropriate size (5-7 pieces per head 2-3 times a week depending on the animals' appetite and physical state). We offer superworms (*Zophobas morio*) and pinckies once a month as a delicacy. We dust the insects with calcium powder before they are fed to the lizards. All insects should be gut loaded prior to the feeding, as they need to contain sufficient amount of minerals and nutrients.

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