

Keeping of robust forest bavayia (*Bavayia robusta* Wright, Bauer, & Sadlier, 2000) at BION Terrarium Center

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DESCRIPTION, DISTRIBUTION AND BIOLOGY

Bavayia robusta Wright, Bauer, & Sadlier, 2000 is a species of small-sized arboreal geckos of the Diplodactylidae family. However, it should be noted, that *B. robusta* is the largest species within the genus. The species is named after the latin word for strong and powerful. This species is endemic to Grande Terre and Île des Pins in New Caledonia (Fig. 1).



Figure 1. Natural distribution of *B. robusta* on the New Caledonia and some adjacent islands (<https://endemia.nc/en/faune/fiche1013>).

“Recent studies on the New Caledonian endemic geckos show *B. robusta* comprises two distinct genetic groups in southern New Caledonia.

One with a distribution extending along the west coast from Dumbéa and Pointe Maa in the north to at least Mt Dore in the south (includes the type population on Mt Koghis), including adjacent offshore islands - recorded from coastal mangroves, coastal

dry forest, and low and mid elevation humid forest habitats. They are found on the elevation up to 500 m above sea level (a.s.l.).

Another one with a distribution that includes Forêt Nord in the far south of Grande Terre, and populations on the Ile des Pins and its satellite islands – recorded from coastal scrub and low humid forest on Ile des Pins, and from low elevation humid forest at Forêt Nord.

The status of populations of on the south-east coast formerly assigned to *Bavayia cyclura* Günther, 1872 are unknown but most likely are conspecific with *B. robusta*.” (citation from the Internet resource: <https://endemia.nc/en/faune/fiche1013>).

These geckos lead an arboreal lifestyle on low-growing trees and shrubs, hiding in hollows and irregularities in the bark, sometimes in fallen leaves under trees and at the base of the roots.



Figure 2. Young male of *B. robusta*.

The body length of the gecko reaches 80-100 mm (3.15-3.93 in), with a thick body and a tail that makes up 50% of the total length of the animal. Finger tips are moderately wide. The background coloration is dark brown, color pattern on the upper body usually consists of 4-5 light-brown spots, with dark edges underneath (Fig. 2). The ventral part is yellowish. A distinctive and attractive feature is the large, massive head of adult individuals. Adult males can reach weight of 35 g. Males have clearly visible hemipenial bumps at the base of the tail, while females do not. Females are also slightly smaller in size than males. Presence of the hemipenial bulges can be usually seen at the age of 4-5 months.

These geckos are quite nervous and fast and therefore they are not suitable for handling. If scared they are able to autotomize their tails. They demonstrate activity peak at dusk and during the first part of the night.

In the wild these geckos face many threat that negatively affect their population. There is a potentially significant risk to populations residing in humid forests with high infestation levels of the introduced Little Red Fire Ant (*Wasmannia auropunctata* (Roger, 1863)), resulting in a notable decline in abundance. The humid forest habitats suitable for these reptiles faces a potential threat due to repeated fires in adjacent maquis habitat, leading to the loss and degradation of the forest edge. Coastal forest areas are facing a moderate to high level of threat due to the loss, modification, and fragmentation of forest habitat caused by local agriculture. In heavily affected forests, particularly on islands, there is a localized but potentially significant threat from exotic pests such as rats and cats, which prey on adults, young, and eggs. Due to its relatively wide distribution, the species does not meet the criteria necessary to categorize it as facing a high level of threat. However, the majority of coastal habitat is heavily fragmented, altered, and plagued by the invasive Little Red Fire Ant. Therefore, it is considered to be Near Threatened (NT) due to these factors.

KEEPING AT BION TERRARIUM CENTER

ADULTS

Keeping. *B. robusta* does not have strict housing, temperature, humidity or feeding requirements. They require a little more effort to be kept properly than other New Caledonian geckos, but nothing that is beyond the average keeper. Adults can easily be housed in 30x30x45 cm (11.81x11.81x17.71 in) or 5 L containers singly or in pairs. It is important to monitor the condition of the females, since the courtship of males can be quite aggressive until the death of the female. If you don't plant them in time. The volume must have good lateral ventilation and ventilation in the lid (ideally made of wire mesh). Babies and young animals are kept in plastic boxes or small glass terrariums. Adult males are likely to fight if kept together, so make sure you only have one male in the enclosure. The most important aspect of keeping them is that they should have plenty of vines, branches or plants with a diameter small enough for them to fully grasp. They also happily hide under pieces of bark or in artificial shelters. The ovipositor with coconut substrate serves as a humidity chamber. Several dry oak leaves

can be added as side decoration, which will make the life of the geckos more comfortable.



Figure 3. Gravid *B. robusta* female hiding in dry oak leaves.

We keep them without substrate and use a paper towel instead. The substrate (coconut copra) is placed only in the moist chamber, which also serves as an ovipositor.

Lighting & Temperature.

A basking point is not required. They live at a background temperature of +24 - +26 °C (75.2–78.8 °F). If it is possible to arrange a large terrarium with a temperature gradient, you can equip a basking place (low-power incandescent lamp), which should be the hottest point in the cage, giving a warming point with a temperature range of +27 - +29 °C (80.6–84.2 °F). However, this is not obligatory. The geckos will benefit from UVB 5.0 lighting, but according to our experience, confirmed by many other private breeders, UVB is not strictly needed for these geckos. Nighttime ambient temperature should not get below +22 °C (71.6 °F), at day – not higher than +28 °C (80.6 °F). For wintering, these temperatures are lowered by about 3 degrees. It is necessary to have sufficient space to the cage so that the geckos can crawl to an area that is closer to +23 °C (73.4 °F). Lighting period is provided by the general lighting lamps in the room/lab and is 10-12 hours a day. During the winter months, the lighting period is reduced to 6-8 hours.

Humidity. Humidity level is 70-80%. We do light spraying twice a day allowing the inner decoration to dry out. This is also the source of water for the reptiles. Water dish can be optionally provided.

Diet. The diet is mixed: they eat insects (crickets, cockroaches) and baby fruit purees without added sugar (more specialized mixtures Repashy or Pangea Gecko Diets can be given, but they are expensive). The hatchlings should be offered either 10-day-old crickets or fruit flies, dusted with calcium powder and supplemented with D3. Adults eat 0,8-1,5 cm (0.3-0.6 in) crickets or other food of a similar size (cockroaches). We feed our geckos twice a week, offering insects at one time and fruit mixtures during the second feeding. General feeding frequency is 2-3 times a week depending on appetite. Babies are fed daily (2-3 insects depending on the appetite and puree, that is always available inside the volume, but changed regularly in order to prevent the spreading of mold). All feeding items (puree and insects) are dusted with Ca + D3 powder every feeding.

Reference

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3. Wright, J.L., Bauer, A.M. & Sadlier, R.A. 2000. Two new gecko species allied to *Bavayia sauvagii* and *Bavayia cyclura* (Reptilia: Diplodactylidae) from New Caledonia. Pacific Science 54: 39-55.
4. <https://reptile-database.reptarium.cz/species?genus=Bavayia&species=robusta>
5. <https://endemia.nc/en/faune/fiche1013>