

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/365891715>

Panther chameleons *Furcifer pardalis* using aerial cables in urban habitats

Article in *Herpetological Bulletin* · December 2022

DOI: 10.33256/hb162.4344

CITATIONS

0

READS

140

8 authors, including:



Grégory Deso

AHPAM (Association Herpétologique de Provence Alpes Méditerranée)

77 PUBLICATIONS 229 CITATIONS

[SEE PROFILE](#)



Xavier Bonnet

French National Centre for Scientific Research

334 PUBLICATIONS 8,940 CITATIONS

[SEE PROFILE](#)



Markus Roesch

CIBIO Research Center in Biodiversity and Genetic Resources

17 PUBLICATIONS 27 CITATIONS

[SEE PROFILE](#)



Probst Jean-Michel

Nature et Patrimoine

676 PUBLICATIONS 576 CITATIONS

[SEE PROFILE](#)

Some of the authors of this publication are also working on these related projects:



Translocation of french continental Hermann's tortoise [View project](#)



LIFE Tortue d'Hermann [View project](#)

Panther chameleons *Furcifer pardalis* using aerial cables in urban habitats

GRÉGORY DESO^{1*}, XAVIER BONNET², MARKUS A. ROESCH³, DYLAN LAURET⁴, JEAN-MICHEL PROBST⁵,
XAVIER PORCEL⁵, JULIEN RENET¹ & NICOLAS DUBOS⁶

¹AHPAM - Association Herpétologique de Provence Alpes Méditerranée, Maison des Associations, 384 route de Caderousse, 84100 Orange, France

²Centre d'Étude Biologique de Chizé, UMR-7372, CNRS-Université de La Rochelle, 79360, Villiers en Bois, France

³Association Nature Océan Indien, 46 Rue des Mascariens, 97429 Petite Ile, La Réunion, France

⁴12 rue Montesquieu, Appartement 14 Les Trois Mares, 97430 Le Tampon, La Réunion, France

⁵Association Nature and Patrimoine, Sainte Clotilde, La Réunion, France

⁶CIBIO, Centro de Investigação em Biodiversidade e Recursos Genéticos, InBIO Laboratório Associado, Campus de Vairão, Universidade do Porto, 4485-661 Vairão, Portugal

*Corresponding author e-mail: ahpam.contact@gmail.com

The panther chameleon *Furcifer pardalis* Cuvier 1829, was introduced from Madagascar to Réunion Island in 1750 and 1830 (Cheke, 1987; Probst, 1998). Despite being an introduced species, this chameleon is commonly considered a native, locally called 'endormi' for 'asleep', and is protected by French law. In its native range in Madagascar, the species is mainly observed in open areas such as forest edges, shrubby or semi-natural areas, where it benefits from a good overview of its environment (Andreone et al., 2005; Lutzmann, 2006). However, habitat use in anthropogenic environments has been poorly documented. Here we report observations of an adult male *F. pardalis* in an urban situation.

On 7 June 2022, during a survey along electric cables suspended about 10 m above ground, an adult male *F.*

pardalis was observed resting above a busy road at 17:45 h (air temp. 20.7 °C) in the city of Le Tampon [21° 15'45" S, 55° 30'17" E] (Fig. 1A). We followed the chameleon until dusk at 18:02 h (20 °C). The next morning at 08:10 h (18.7 °C, Fig. 1B) the chameleon was still in the same position. Recognition of individuals uses the unique shape of the white lateral stripe, which is fixed in adult male *F. pardalis* (Bourgat, 1969). This early morning observation suggests that the chameleon spent the night on the aerial cable network. Later that same morning at 10:58 h (22 °C) we photographed the same chameleon catching prey that was on an adjacent cable (Fig. 1C).

Road traffic has increased considerably in recent years in Réunion Island and vehicle collisions with chameleons

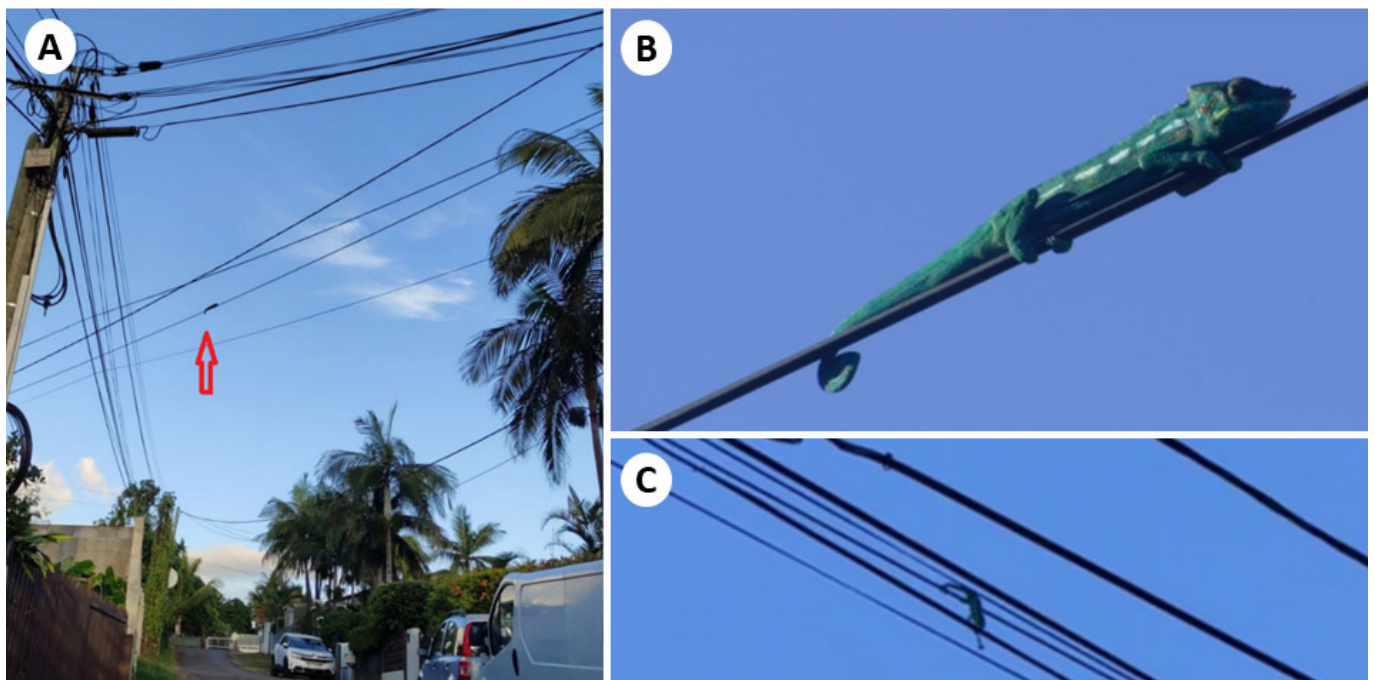


Figure 1. Adult male *Furcifer pardalis* on an aerial electrical cable in Le Tampon - **A.** In late afternoon (chameleon indicated by a red arrow), **B.** The same individual observed the next morning, and **C.** Showing the capture of prey

are numerous (author's personal observations). In its native range as well as in Réunion Island, many anecdotal accounts from naturalists show chameleons moving on the aerial cable network (Nečas, 2004; for one example see Labo SVT2 Canon 2017), presumably these chameleons are predisposed to walk on aerial cables given their similarity to natural branches and vines. Being out of reach of vehicles, humans and domestic animals, such as cats, while moving across roads and gardens provides better chances of survival and possibly facilitates dispersal, mate searching and foraging. Recent radio-tracking results show that in chameleons, males are more mobile than females (Gehring et al., 2008). This suggests that cable networks and ongoing land use change (urbanisation) may have some influence on chameleon population dynamics. Our observations reported here show the use of overhead wires by a male *F. pardalis* over busy city roads and gardens, for nocturnal resting, dispersal as well as feeding. New measures to bury overhead cable networks could have an impact on the population dynamics of urban and peri-urban chameleons. Further studies are needed to explore the spatial ecology of *F. pardalis*, notably to better understand how this species has successfully adapted to highly modified urban habitats.

ACKNOWLEDGEMENT

We would like to thank Jean-Christophe de Massary (MNHN) for sending us the thesis on chameleons by Mr Robert Bourgat.

REFERENCES

- Andreone, F., Guarino, F.M. & Randrianirina, J.E. (2005). Life history traits and age profile as useful conservation tools for the panther chameleons (*Furcifer pardalis*) at Nosy Be, NW Madagascar. *Tropical Zoology* 8: 209–225.
- Bourgat, R. (1969). Recherches écologiques et biologiques sur le *Chamaeleo pardalis* Cuvier 1829; île de la Réunion et de Madagascar. Thèse Univ. Montpellier, 16 septembre 1969. N° CNRS A.O. 2557. 208 pp.
- Cheke, A. (1987). Species accounts: the native fauna - Reptiles (Tortoises, Marine turtles, Lizards, Snakes). In *Studies of Mascarene Island Birds*, 51–59 pp. Diamond A.W. (ed.). Cambridge University Press, UK. 458 pp.
- Gehring, P.S., Lutzmann, N., Furrer, S. & Sossinka, R. (2008). Habitat preferences and activity patterns of *Furcifer pardalis* (Cuvier, 1829) in the Masoala Rain Forest Hall of the Zurich Zoo. *Salamandra* 44: 129–140.
- Labo SVT 2Canons (2017). Déplacement et accouplement de 'l'endormi' (Caméléon panthère, *Furcifer pardalis*): Localisation : Chemin Finette, Il de la Réunion. <https://www.youtube.com/watch?v=64mihxATiAY>.
- Lutzmann, N. (2006). Untersuchungen zur Ökologie der Chamäleonfauna des National parks Masoala in Nordost Madagaskar. – Dissertation University of Bonn, unpubl.
- Nečas, P. (2004). Caméléons, joyaux cachés de la nature. Paris: Co-Edition Chimaira/La Ferme Tropicale, 382 pp.
- Probst, J.-M. (1998). Faune protégée de La Réunion: Endormi ou Caméléon panthère *Chamaeleo pardalis* (Cuvier, 1829). *Données Naturalistes Animalières* 4: 43.
- Tolley, K.A., Raw, R.N.V., Altwegg, R. & Measey, G.J. (2010). Chameleons on the move: Survival and movement of the cape dwarf chameleon, within a fragmented Urban habitat. *African Zoology* 45: 99–106. <https://doi.org/10.3377/004.045.0105>.

Accepted: 14 July 2022