

NOTES

An albino molossid bat from the southwestern Indian Ocean region

Beza Ramasindrazana^{1,2,3}, **David A. Wilkinson**^{3,4},
Marina Beral^{3,5,6} & **Muriel Dietrich**^{3,4}

¹Université d'Antananarivo, Faculté des Sciences,
Département de Biologie Animale, BP 906,
Antananarivo 101, Madagascar

²Association Vahatra, BP 3972, Antananarivo 101,
Madagascar

E-mail: ramasindrazana@gmail.com

³Centre de Recherche et de Veille sur les maladies
émergentes dans l'Océan Indien, 2 rue Maxime Rivière,
97490 Sainte Clotilde, La Réunion, France

E-mail: dwilkin799@gmail.com, muriel.dietrich@gmail.
com, marina.beral@gmail.com

⁴Université de La Réunion, 15 Avenue René Cassin,
97490 Saint Denis, La Réunion, France

⁵Centre de coopération Internationale en Recherche
Agronomique pour le Développement (CIRAD), UMR
15 CMAEE, 97490 Sainte Clotilde, La Réunion, France

⁶Institut National de la Recherche Agronomique (INRA),
UMR 1309 CMAEE, 97490 Sainte Clotilde, La Réunion,
France

Although albinism has been documented in many groups of vertebrates (Acevedo *et al.*, 2009; El-Bakry, 2010; Razafimanjato *et al.*, 2012), it is considered rare in bats (Uieda, 2000). Nonetheless, recent studies reported cases of albinism from different bat families (Uieda, 2000; Buys *et al.*, 2001; Aul & Marimuthu, 2006; Talerico *et al.*, 2008). To date, 43 species of completely albino bats have been recorded from 24 countries (Sánchez-Hernández *et al.*, 2010). Within the Family Molossidae, complete albinism has been detected in only five species, including those from South America and Australia: *Tadarida brasiliensis*, *Chaerephon plicatus*, *Molossus fortis*, *M. molossus*, and *Eumops glacinus* (Heatwole *et al.*, 1964; Uieda, 2000; Sodr e *et al.*, 2004). In this note, we report the first case of albinism in a molossid bat from La Réunion.

A survey of a *Mormopterus francoismoutoui* maternity colony in the western portion of La Réunion was undertaken in December 2012 and in early 2013. The colony is located in a cave in the Trois Bassins ravine (21°06'36"S, 55°15'35"E), which has a 5 m

wide entrance that opens up into a roosting site of approximately 30 m² surface and 8 m high. The colony has been previously estimated to contain 66,500 individuals during the reproductive season (Here, 2009), making this cave the most significant known reproduction site for this species. The surrounding habitat is mainly characterized by a secondary pastoral zone dominated by trees of *Phytocellobium dulce*, *Tamarindus indica* and *Albizia lebbek*.

The albino bat was firstly observed on 11 December 2012 within the colony and photos were taken (Figure 1A). The bat was roosting high on a cave wall, making it difficult to catch. On 13 February 2013, we captured it by hand (Figures 1B, C, D). It had a free tail, long hairs on the hind foot, separated ears, completely white fur, and red to pink eyes. It was a female with small mammae, forearm length of 37.0 mm, ear length of 15.5 mm, hind foot length of 6.5 mm (excluding claw), and tail length of 37.5 mm. These characteristics allowed us to conclude that it was an albino *M. francoismoutoui*. After being measured, the individual was released inside the cave.

Our observation represents the first record of complete albinism in *M. francoismoutoui*, a small insectivorous bat, largely distributed and endemic to La Réunion. Additionally, this is apparently the first reported record of an albino bat from the southwestern Indian Ocean. Within the colony, the individual in question roosted amongst its congeners. Our observations are in parallel with previous reports that most albino bats recorded so far have been observed inside sheltered roosts such as caves, mines, galleries or buildings (Uieda, 2000). Such sites may be essential for the survival of albino bats to protect them against sunlight.

The record reported here is not the first of a white bat on La Réunion. Bory de S' Vincent noted the presence of a small colony of white-bodied bats within palm leaves at two different sites during his visit to the island in 1802 (Lavergne, 2006). This "species", known only from the written observations of Bory de S' Vincent, was "described" as *Boryptera alba* (Brial, 2001).

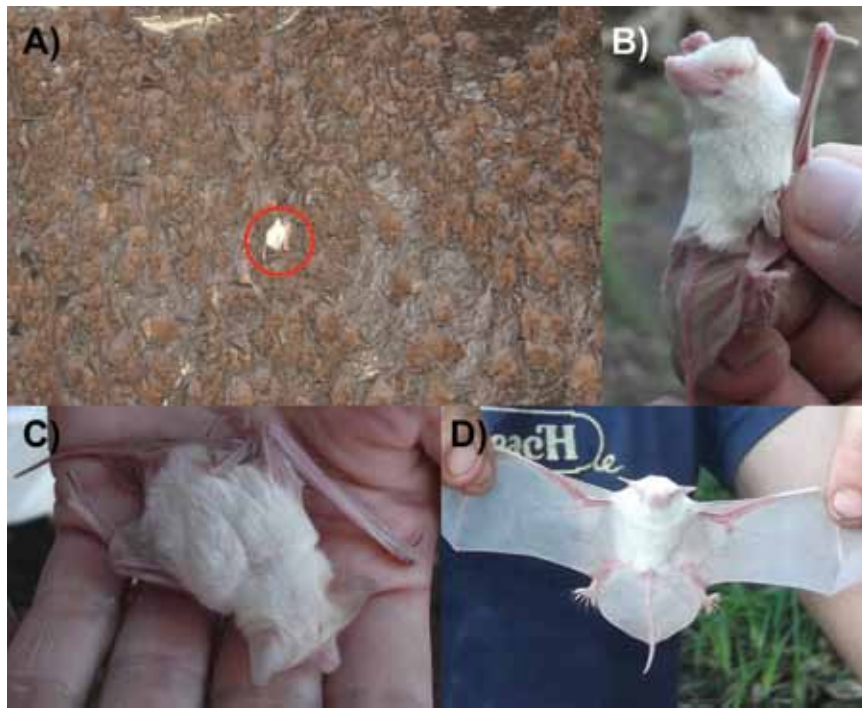


Figure 1. An albino *Mormopterus francoismoutoui* from Trois Bassins Cave, La Réunion: A) within a colony (Photograph by M. Dietrich & B. Ramasindrazana, 2012), B-C-D) hand held (Photographs by M. Dietrich & B. Ramasindrazana, 2013).

Acknowledgements

We would like to thank Julien Mélade, Aude Benlali, and Gildas Le Minter for their help with fieldwork. We are grateful to the Direction de l'Environnement, de l'Aménagement et du Logement for permit associated with the captures (permit N°2013-106). We would also like to thank Michel Barataud for his valuable advice on the bats of La Réunion. Steven M. Goodman and Paul Racey provided valuable comments on a previous version of this note.

References

- Acevedo, J., Aguayo-Lobo, A. & Torres, D. 2009.** Albino weddell seal at Cape Shirreff, Livingston Island, Antarctica. *Polar Biology*, 32: 1239-1243.
- Aul, B. & Marimuthu, G. 2006.** Sighting of an albino bat in a colony of cave-dwelling microchiropteran, *Hipposideros diadema nicobarensis* at the Nicobar Islands. *Current Science*, 90: 912-914.
- Brial, P. 2001.** Une espèce inconnue de microchiroptère observée par Bory de Saint-Vincent à l'île de la Réunion en 1801. *Bulletin de la Société de Géographie de La Réunion*, 1: 5.
- Buys, J., Heijligers, H. & Dorenbosch, M. 2001.** First record of an albino long-eared bat *Plecotus auritus* in The Netherlands. *Lutra*, 45: 49-52.
- El-Bakry, A. M. 2010.** Study by transmission and scanning electron microscopy of the morphogenesis of three types of lingual papillae in the albino rat (*Rattus rattus*). *Acta Zoologica*, 91: 267-278.
- Heatwole, H., Arroyo-Salaman, J. F. & Hernandez, G. 1964.** Albinism in the bat, *Molossus fortis*. *Journal of Mammalogy*, 45: 476.
- Here, L. 2009.** Contribution à l'étude des chiroptères de l'île de La Réunion: Répartition et habitats prioritaires en matière de conservation. Master 2 Biodiversité et Ecosystèmes Tropicaux, Université de La Réunion. La Réunion.
- Lavergne, C. 2006.** Petites histoires des lataniers par les textes. *Magazine de Palmeraie-Union Latania*, 15: 45-51.
- Razafimanjato, G., Sam, T. S., Rene de Roland, L.-A. & Ramamonjisoa, J. 2012.** Two records of albinism in Malagasy birds. *Malagasy Nature*, 6: 127-128.
- Sánchez-Hernández, C., Romero-Almaraz, M. d. L., Taboada-Salgado, A., Almazán-Catalán, A., Schnell, G. D. & Sanchez-Vásquez, L. 2010.** Five albino bats from Guerrero and Colima, Mexico. *Chiroptera Neotropical*, 16: 541-545.
- Sodré, M., Uieda, W. & Baldim, M. 2004.** First record of albinism in the bat *Eumops glaucinus* (Molossidae) from southeastern Brazil. *Chiroptera Neotropical*, 10: 200-201.
- Talerico, J. M., Jung, T. S., Barclay, R. M. R. & Melton, K. S. 2008.** Abberant coloration in a Little Brown Bat (*Myotis lucifugus*) from the Yukon. *Northwestern Naturalist*, 89: 198-200.
- Uieda, W. 2000.** A review of complete albinism in bats with five new cases from Brazil. *Acta Chiropterologica*, 2: 97-105.