

## A new locality for *Correlophus ciliatus* and *Rhacodactylus leachianus* (Sauria: Diplodactylidae) from Néhoué River, northern New Caledonia

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Giant geckos from New Caledonia (Pacific Ocean) are charismatic nocturnal lizards. This paraphyletic group is represented by three genera, *Rhacodactylus*, *Correlophus* and *Mniarogekko*, all endemic to New Caledonia (Bauer et al., 2012). *Rhacodactylus leachianus* (Cuvier, 1829) is largely distributed on the Grande Terre including the Île des Pins and its satellite islands, whereas *Correlophus ciliatus* Guichenot, 1866 is mostly known in the southern part of the Grande Terre, the Île des Pins and its satellite islands (Bauer et al., 2012). Here, we report a new locality for both species in the north-western part of Grande Terre, along the Néhoué River (Fig. 1).

The Néhoué River is characterized by gallery forests growing on deep alluvial soils. This river is isolated and surrounded by disturbed savannah and maquis shrubland. It is managed by Province Nord for recreation purposes. We conducted nocturnal researches along the river (Fig. 1, 20,41708°S, 164,2212°E, < 10 m a.s.l.) on two consecutive days, 18.12.2014 (between 7.00 pm to 10.00 pm) and 19.12.2014 (between 6.00 pm to 8.00 pm). Geckos were searched for with head lamps. All individuals were photographed to allow identification using the available literature (Sadlier and Bauer 2000; Bauer et al., 2012).

We observed seven native gecko species: *Bavayia* (aff.) *cyclura* (n=1), *Bavayia* (aff.) *exsuccida* (n=1), *Correlophus ciliatus* (n=1), *Dierrogekko nehoueensis* Bauer, Jackman, Sadlier and Whitaker, 2006 (n=1), *Eurydactylodes agricolae* Henkel and Böhme, 2001 (n=1), *Mniarogekko jalu* Bauer, Whitaker, Sadlier and Jackman, 2012 (n=1) and *Rhacodactylus leachianus* (n=1). Also, the alien *Hemidactylus frenatus* Dumeril and Bibron, 1836 (n=3) has been sighted. The occurrence of *C. ciliatus* and *R. leachianus* (Fig. 2 and 3) represent new records for this site. Both gecko species were observed close to the ground, at a height of less than 1.5 m.

It is the first time that *R. leachianus* is recorded in the north-western coast of Grande Terre, about 40 km west from the closest previous records near Mont Mandjéla.



**Figure 1.** Map showing the current known distribution of *Correlophus ciliatus* (orange spots) and *Rhacodactylus leachianus* (purple spot), based on the distribution review from Bauer et al. (2012). The new locality along the Néhoué River (red star) is also illustrated.

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**Figure 2.** *Correlophus ciliatus* (a) and *Rhacodactylus leachianus* (b) observed along the Néhoué River. Photos: M. Sanchez.

More surprising is the record of *C. ciliatus*, about 240 km north of the closest known occurrence near Canala. This species was identified as *C. ciliatus* on the basis of the heterogeneous dorsal trunk scalation and the absence of whitish tubercles at the lower back nor at the base of tail (see Bauer *et al.*, 2012). It is unlikely it could have been introduced at Néhoué River for several reasons. First, this place appears as a suitable relict habitat for giant geckos. Also, Néhoué River remains a very isolated place very far from the previously known distribution of *C. ciliatus*, thus “vehicular-rafting” and willingly translocation from another place or from captive breeding (prohibited for all giant geckos in New Caledonia) seem unlikely.

It should be noted that this record is relatively close (90 km) to the Belep Islands, to which the sister taxa *Correlophus belepensis* Bauer, Jackman, Sadlier and Whitaker, 2012 is restricted (Fig. 1). Based on known distribution of these two closely related species, Bauer *et al.* (2012) suggested that the occurrence of *C. belepensis* is relictual and that it is not a primary endemic in the Belep Islands. Our record supports that *C. ciliatus* may be present more extensively in the northern Grande Terre and that *C. belepensis* could be primarily restricted to Belep Islands.

The Néhoué River forest has been identified as a high conservation value area (Veillon, Dagostini and Jaffré, 1999). Despite its relatively small area, 13 species of native reptiles (7 geckos and 6 skinks) have now been documented (Whitaker *et al.*, 2004; Bauer *et al.*, 2006; this paper), including 6 threatened species: the Critically Endangered (CR) *Dierogecko nehoueensis*, the Endangered (EN) *Bavayia exsuccida* Bauer, Whitaker and Sadlier, 1998, *Caledoniscincus auratus* Sadlier, Bauer and Colgan, 1999, *Mniarogecko jalu*

and *Kanakysaurus viviparus* Sadlier, Bauer, Smith and Whitaker, 2004, and the Vulnerable (VU) *Correlophus ciliatus* (for IUCN status, see Whitaker, Sadlier and Bauer, 2010; Bauer *et al.*, 2012; Whitaker and Sadlier, 2013a, 2013b, 2013c, 2013d).

Habitat degradation and invasive species (rats, feral cats, feral pigs, rusa deers, fire ants) are among the main threats to its biodiversity of Néhoué River (Whitaker *et al.*, 2004). To protect this region, we believe that conservation management should be undertaken at a larger scale and include the adjacent Dôme de Tiébaghi which contains a somewhat similar but richer herpetofauna that is currently threatened by mining (Sadlier *et al.*, 2014). Finally, the finding of these two remarkable giant geckos species in a well-known recreational place, indicates that more investigations into the herpetofauna of the Néhoué River and its surroundings are warranted.

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