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A new species of lizard in the genus *Caledoniscincus* (Reptilia: Scincidae) from far northwest New Caledonia

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Abstract

A new species of skink in the genus *Caledoniscincus* is described from the far north-west region of New Caledonia. It is known from a single location, the isolated ultramafic massif of Dôme de Tiébaghi, north of Koumac. The new species, *Caledoniscincus pelletieri* **sp. nov.**, has a bold, white mid-lateral stripe on the body, a feature which distinguishes it from most other species of *Caledoniscincus* except the regionally sympatric *Caledoniscincus haplorhinus* (Günther) and *Caledoniscincus austrocaledonicus* (Bavay), and the recently described *Caledoniscincus constellatus* Sadlier, Whitaker, Wood & Bauer just to the south. The new species can be distinguished from these taxa in features of scalation and colouration, most notably in lacking an extension of the pale midlateral stripe between the ear and forelimbs and in having more lamellae on the underside of the fourth toe. The differences in morphology between *C. pelletieri* **sp. nov.** and the other members of the genus are complemented by a high level of genetic differentiation, further supporting its distinctiveness as an independent evolutionary lineage warranting recognition as a distinct species. The DNA sequence data for the ND2 mitochondrial gene identifies the new species as the sister to *C. constellatus* and these two taxa as the sister to all *Caledoniscincus*. The species is of extremely high conservation concern given its restricted distribution in an area that is currently being heavily impacted by human activities, and it satisfies the IUCN criteria to be ranked as a Critically Endangered species.

Key words: Reptilia, Scincidae, New Caledonia, Endangered

Résumé

Nous décrivons ici un nouveau lézard Scincidae du genre *Caledoniscincus* de l'extrême Nord-Ouest de la Nouvelle-Calédonie. Il n'est connu que d'une unique localité, le massif ultra-basique du Dôme de Tiébaghi, au Nord de Koumac. La nouvelle espèce, *Caledoniscincus pelletieri* **sp. nov.**, possède une ligne blanche médio-latérale marquée sur le corps, une caractéristique qui la distingue de la majorité des autres espèces du genre *Caledoniscincus*, à l'exception de l'endémique régionale sympatrique *Caledoniscincus haplorhinus* (Günther) et de *Caledoniscincus austrocaledonicus* (Bavay), mais aussi de l'espèce décrite récemment, *Caledoniscincus constellatus* Sadlier, Whitaker, Wood & Bauer qui se rencontre un peu plus au Sud. La nouvelle espèce peut se distinguer de ces taxa par ses caractéristiques d'écaillage et de coloration, surtout par l'absence d'une extension de la bande pâle médio-latérale entre l'oreille et les membres antérieurs et par son nombre accru de lamelles sous l'orteil IV. Les différences morphologiques entre *C. pelletieri* **sp. nov.** et les autres membres du genre sont confortées par de fortes divergences génétiques supportant ainsi sa distinction comme une lignée évolutive indépendante devant être reconnue comme une espèce séparée. La séquence d'ADN pour le gène mitochondrial ND2 permet d'identifier cette espèce nouvelle comme l'espèce sœur de *C. constellatus*. Ensemble, ces deux taxa constituent le groupe frère de tous les autres *Caledoniscincus*. Le statut de conservation de cette espèce est

constellatus presented in the original description (Sadlier *et al.* 2012) due to incorrect conversion from UTM coordinates to latitude and longitude.

Caledoniscincus haplorhinus: AMS R.144257–58, R.144284–86, 144288 Grottes de Koumac, 9km E of Koumac 20°33'18"S 164°21'49"E; AMS R.171480–81 Pointe de Vavouto 21°00'40.3"S 164°41'07.9"E; AMS R.171483 Pointe de Vavouto 21°00'36.4"S 164°41'8.6"E; AMS R.171491 Pointe de Vavouto 21°00'17.8"S 164°46'7.5"E; AMS R.146459–68, Pindaï, Plage de Pindaï 21°21'26"S 164°57'11"E; AMS R.146433–4, CAS 198763–69, 198770–71 Plage de Ouano 21°50'43"S 165°48'33"E; AMS R.77409, R.77427, R.77429, R.77437, R.77451–52, R.78319–20, R.78322, R.78326, Nouméa, Fambourg Blanchot 22°18'S 166°27'E; AMS R.135119–23 Nouville, Isle Nou 22°16'S 166°24'E.

Caledoniscincus constellatus: MNHN 2011.0228 Pointe de Vavouto 21°00'29.9"S 164°41'16.1"E; AMS R.171471 & 171496 Pointe de Vavouto 21°00'24.6"S 164°41'13.8"E; AMS R.171470 Pointe de Vavouto 21°00'30.4"S 164°41'19.7"E.

Caledoniscincus austrocaledonicus: 28 specimens as listed by Sadlier *et al.* (1999) from the neotype locality of Mt. Aoupinié.

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APPENDIX 1. List of specimens used in the genetic study and associated GenBank accession numbers for ND2 gene fragment. For museum acronyms see materials and methods.

Genus	Species	Voucher	Locality	GenBank Accession No.
Outgroup				
<i>Celatiscincus</i>	<i>eurytotis</i>	AMS R.138574	Île des Pins	DQ675204
<i>Graciliscincus</i>	<i>shonae</i>	AMS R. 165813	Mt. Ouin	DQ675207
<i>Kanakysaurus</i>	<i>viviparus</i>	AMS R.161299	Île Pott	DQ675209
<i>Lacertoides</i>	<i>pardalis</i>	AMS R.148051	Kwa Néie	DQ675211
<i>Lioscincus</i>	<i>nigrofasciolatus</i>	AMS R.138624	Île des Pins	DQ675216
<i>Lioscincus</i>	<i>steindachneri</i>	AMS R.149890	Mé Adéo	DQ675218
<i>Lioscincus</i>	<i>tillieri</i>	AMS R.148037	Mt. Vulcain	DQ675220
<i>Marmorosphax</i>	<i>tricolour</i>	CAS 214451	Mt. Koghis	DQ675227
<i>Nannoscincus</i>	<i>mariei</i>	AMS R.146484	Mt. Mou	DQ675232
<i>Phoboscincus</i>	<i>garnieri</i>	AMS R.151964	Mt. Dore	DQ675237
<i>Sigaloseps</i>	<i>deplanchei</i>	AMS R.148065	Plaine des Lacs	DQ675238
<i>Simiscincus</i>	<i>aurantiacus</i>	AMS R.144356	Mt. Koghis	DQ675250
<i>Tropidoscincus</i>	<i>variabilis</i>	AMS R.161879	Kwa Né Mwâ	DQ675242
Ingroup				
<i>Caledoniscincus</i>	<i>constellatus</i>	MNHN 2011.0228	Pointe de Vavouto	JQ743847
<i>Caledoniscincus</i>	<i>constellatus</i>	AMS R.171496	Pointe de Vavouto	JQ743846
<i>Caledoniscincus</i>	<i>constellatus</i>	AMS R.171470	Pointe de Vavouto	JQ743845
<i>Caledoniscincus</i>	<i>pelletieri</i> sp. nov.	MNHN 2012.0225	Dôme de Tiébaghi	JX988521
<i>Caledoniscincus</i>	<i>pelletieri</i> sp. nov.	AMS R.174944	Dôme de Tiébaghi	JX988522
<i>Caledoniscincus</i>	<i>notialis</i>	AMS R.172613	Mt. Humbolt	JQ743848
<i>Caledoniscincus</i>	<i>notialis</i>	AMS R.172648	Yaté Barrage	JQ743849
<i>Caledoniscincus</i>	<i>auratus</i>	AMS R157910	Forêt Tia	JQ743850
<i>Caledoniscincus</i>	<i>auratus</i>	AMS R144298	Grottes de Koumac	JQ743851
<i>Caledoniscincus</i>	<i>atropunctatus</i>	AMS R172604	Port Boisé	JQ743853
<i>Caledoniscincus</i>	<i>atropunctatus</i>	AMS R161803	Île Art	DQ675196
<i>Caledoniscincus</i>	<i>cryptos</i>	AMS R.135141	Col d'Amieu	JQ743852
<i>Caledoniscincus</i>	<i>chazeau</i>	AMS R.138515	Koulnoué	DQ675272
<i>Caledoniscincus</i>	<i>renevieri</i>	AMS R.165851	Mt. Aoupinié	DQ675268

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