

# The scaled king and his knight: Two new giant bent-toed gecko species from New Guinea

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The new giant bent-toed gecko species *Cyrtodactylus rex*. Credit: S. Richards

The extremely complex geological history of New Guinea has allowed many of its animals and plants the chance to grow different enough to make a name for themselves. In the case of two newly described and unusually large gecko species - only a noble name would do. The two

new species whose names respectively mean 'knight' and 'king' were discovered by a team led by Dr. Paul Oliver, The Australian National University and University of Melbourne, are described in the open-access journal *ZooKeys*.

Both [new species](#) belong to the world's most diverse gecko genus *Cyrtodactylus* which comprises more than 200 species known to date. These reptiles are commonly called bent-toed or bow-fingered geckos due to their distinctive slender curved toes. They occur through Asia and Australia.

These 200 species vary greatly in size, build and colouration. However, one of the newly described species, called *C. rex*, meaning "king" in Latin, is the largest species in the genus, and among the biggest of all geckos in the world.

In general, the bent-toed geckos measure no more than 13 cm in length, yet the "gecko king" can grow up to 17 cm, with the females slightly bigger than the males. It is also characterised with upper body side covered in alternating regions of dark grey brown and medium brown. There are also variable in size and shape, but clearly defined dark grey-brown markings. All examined specimens are reported to have either four or five dark brown blotches or bands running down their original tails.

The second new [species](#) also bears a noble name - *Cyrtodactylus equestris*, meaning 'knight' in Latin. It is also considered a giant among its relatives with its length of up to 14 cm for the females. Similarly to its larger relative, its head is large and wide, clearly distinct from the neck. Its upper side is coloured with alternating regions of light and medium brown. While in smaller individuals the patches are visibly defined by dark brown edging, such is missing in the larger ones, giving their pattern slightly faded appearance.



Previously known gecko species *Cyrtodactylus novaeguineae* from the southern slopes of the Central Cordillera of New Guinea. Credit: S. Richards

As a whole, the distribution of the two new geckos overlap, although the "gecko knight" is reported to prefer the relatively undisturbed hill or lower montane forests of northern New Guinea and its neighbour "the king" seems to stick to the surrounding lowlands.

While the larger size of the New Guinean bent-toed [geckos](#) seems to be an evolutionary trend, the role of potential factors such as competition, ecological diversification, isolation and dispersal remains quite a mystery.



**More information:** Oliver PM, Richards SJ, Mumpuni, Rösler H (2016) The Knight and the King: two new species of giant bent-toed gecko (*Cyrtodactylus*, Gekkonidae, Squamata) from northern New Guinea, with comments on endemism in the North Papuan Mountains. ZooKeys 562: 105-130. [DOI: 10.3897/zookeys.562.6052](https://doi.org/10.3897/zookeys.562.6052)

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