

A third new *Cyrtodactylus* (Squamata: Gekkonidae) from Phong Nha-Ke Bang National Park, Truong Son Range, Vietnam

Ziegler T., Nazarov R., Orlov N., Nguyen T.Q., Vu T.N., Dang K.N., Dinh T.H., Schmitz A.
Cologne Zoo, Riehler Straße 173, D-50735 Cologne, Germany; Zoological Museum, Moscow State University, B. Nikitskaya ul. 6, Moscow 103009, Russian Federation; Zoological Institute, Russian Academy of Sciences, Universitetskaya nab. 1, St. Petersburg 199034, Russian Federation; Institute of Ecology and Biological Resources, 18 Hoang Quoc Viet St., Hanoi, Viet Nam; Department of Vertebrate Zoology, Faculty of Biology, Vietnam National University, Hanoi, 334 Nguyen Trai Str., Thanh Xuan Hanoi, Viet Nam; Phong Nha - Ke Bang National Park, Phong Nha - Son Trach Commune, Bo Trach District, Quang Binh Province, Viet Nam; Muséum d'histoire Naturelle, Department of Herpetology and Ichthyology, C.P. 6434, CH-1211 Geneva 6, Switzerland

Abstract: We describe a third cryptic species of the genus *Cyrtodactylus* from Phong Nha - Ke Bang National Park, Quang Binh Province, Vietnam. *Cyrtodactylus roesleri* sp. nov. is distinguished from the remaining Indochinese bent-toed geckos by a combination of the following characters: size small, with a maximum SVL of 75.3 mm; dorsal pattern consisting of dark nuchal band and 4-5 sometimes irregularly shaped dark transversal bands between limbs; ventrals in 34-40 longitudinal rows at midbody; continuous series of 20-28 precloacal and femoral pores in males; subcaudal scales transversally enlarged. It is the 15th new reptilian taxon described as new from the karst forests of Phong Nha - Ke Bang National Park in the past decade. In addition, it is the 19th species of *Cyrtodactylus* known from Vietnam and the third *Cyrtodactylus* occurring in sympatry in the karst forests of Phong Nha - Ke Bang National Park. Copyright © 2010 Magnolia Press.

Author Keywords: *Cyrtodactylus roesleri* sp. nov.; Morphology; Phong Nha - Ke Bang National Park; Quang Binh Province; Taxonomy; Vietnam

Index Keywords: *Cyrtodactylus*; Gekkonidae; Gonatodes; Reptilia; Squamata

Year: 2010

Source title: Zootaxa

Issue: 2413

Page : 20-36

Cited by: 5

Link: [Scopus Link](#)

Correspondence Address: Ziegler, T.; Cologne Zoo, Riehler Straße 173, D-50735 Cologne, Germany; email: ziegler@koelnerzoo.de

ISSN: 11755326

Language of Original Document: English

Abbreviated Source Title: Zootaxa

Document Type: Article

Source: Scopus

Authors with affiliations:

- Ziegler, T., Cologne Zoo, Riehler Straße 173, D-50735 Cologne, Germany
- Nazarov, R., Zoological Museum, Moscow State University, B. Nikitskaya ul. 6, Moscow 103009, Russian Federation
- Orlov, N., Zoological Institute, Russian Academy of Sciences, Universitetskaya nab. 1, St. Petersburg 199034, Russian Federation
- Nguyen, T.Q., Institute of Ecology and Biological Resources, 18 Hoang Quoc Viet St., Hanoi, Viet Nam
- Vu, T.N., Department of Vertebrate Zoology, Faculty of Biology, Vietnam National University, Hanoi, 334 Nguyen Trai Str., Thanh Xuan Hanoi, Viet Nam
- Dang, K.N., Phong Nha - Ke Bang National Park, Phong Nha - Son Trach Commune, Bo Trach District, Quang Binh Province, Viet Nam
- Dinh, T.H., Phong Nha - Ke Bang National Park, Phong Nha - Son Trach Commune, Bo Trach District, Quang Binh Province, Viet Nam
- Schmitz, A., Muséum d'histoire Naturelle, Department of Herpetology and Ichthyology, C.P. 6434, CH-1211 Geneva 6, Switzerland

References:

- Bauer, A.M., Two new species of *Cyrtodactylus* (squamata: Gekkonidae) from myanmar (2002) *Proceedings of the California Academy of Sciences*, 53, pp. 73-86
- Bauer, A.M., Descriptions of seven new *Cyrtodactylus* (squamata: Gekkonidae) with a key to the species of myanmar (2003) *Proceedings of the California Academy of Sciences*, 54, pp. 463-498
- Bauer, A.M., Kunya, K., Sumontha, M., Niyomwan, P., Panitvong, N., Pauwels, O.S.G., Chanhom, L., Tunyakorn, K., *Cyrtodactylus erythrops* (squamata: Gekkonidae), a new cave-dwelling gecko from mae hong son province, Thailand (2009) *Zootaxa*, 2124, pp. 51-62
- Bauer, A.M., Pauwels, O.S.G., Chanhom, L., A new species of cave-dwelling *Cyrtodactylus* (squamata: Gekkonidae) from Thailand (2002) *The Natural History Journal of Chulalongkorn University*, 2, pp. 19-29
- Bauer, A.M., Sumontha, M., Pauwels, O.S., Two new species of *Cyrtodactylus* (reptilia: Squamata: Gekkonidae) from Thailand (2003) *Zootaxa*, 376, pp. 1-18
- Darevsky, I.S., Szczerbak, N.N., A new gecko of the genus *Gonydactylus* (sauria: Gekkinidae) with a key to the species from vietnam (1997) *Asiatic Herpetological Research*, 7, pp. 19-22
- David, P., Teynié, A., Ohler, A., A new species of *Cyrtodactylus gray 1827* (reptilia: Squamata: Gekkonidae) from Southern laos (2004) *Raffles Bulletin of Zoology*, 52, pp. 621-627
- Geissler, P., Nazarov, R., Orlov, N.L., Böhme, W., Phung, M.T., Nguyen, Q.T., Ziegler, T., A new species of the *Cyrtodactylus irregularis* complex (squamata: Gekkonidae) from Southern vietnam (2009) *Zootaxa*, 2161, pp. 20-32
- Grismer, L.L., New species of bent-toed gecko (*Cyrtodactylus gray 1827*) from pulau aur, johor, West Malaysia (2005) *Journal of Herpetology*, 39, pp. 424-432
- Grismer, L.L., Leong, T.M., New species of *Cyrtodactylus* (squamata: Gekkonidae) from Southern peninsular Malaysia (2005) *Journal of Herpetology*, 39, pp. 584-591
- Grismer, L.L., Norhayati, A., A new insular species of *Cyrtodactylus* (squamata: Gekkonidae) from the langkawi Archipelago, kedah, peninsula Malaysia (2008) *Zootaxa*, 1924, pp. 53-68
- Grismer, L.L., Wood Jr., P.L., Youmans, T.M., Redescription of the gekkonid lizard *Cyrtodactylus sworderi* (smith, 1925) from Southern peninsular Malaysia (2007) *Hamadryad*, 31, pp. 250-257
- Grismer, L.L., Chan, K.O., Grismer, J.L., Wood, P.L., Belabut, D., Three new species of *Cyrtodactylus* (squamata: Gekkonidae)

- from peninsular Malaysia (2008) *Zootaxa*, 1921, pp. 1-23
- Guidon, S., Gascuel, O., A simple, fast, and accurate algorithm to estimate large phylogenies by maximum likelihood (2003) *Systematic Biology*, 52 (5), pp. 696-704
 - Hall, T.A., BioEdit: A user-friendly biological sequence alignment editor and analysis program for windows 95/ 98/NT (1999) *Nucleic Acids Symposium Series*, 41, pp. 95-98
 - Heidrich, A., Rösler, H., Vu, N.T., Böhme, W., Ziegler, T., Another new *Cyrtodactylus* (squamata: Gekkonidae) from phong nha - Ke bang national park, central truong son, vietnam (2007) *Zootaxa*, 1445, pp. 35-48
 - Hoang, X.Q., Orlov, N.L., Ananjeva, N.B., Johns, A.G., Hoang, N.T., Dau, Q.V., Description of a new species of the genus *Cyrtodactylus* gray, 1827 (squamata: Sauria: Gekkonidae) from the karst of north central vietnam (2007) *Russian Journal of Herpetology*, 14, pp. 98-106
 - Kluge, A.G., Gekkotan lizard taxonomy (2001) *Hamadryad*, 26, pp. 1-209
 - Manthey, U., Grossmann, W., (1997) *Amphibien & Reptilien Südasiens*, p. 512. , Münster (Natur und Tier-Verlag)
 - Nazarov, R.A., Orlov, N.L., Nguyen, N.S., Ho, T.C., Taxonomy of naked-toe geckos *Cyrtodactylus irregularis* complex of South vietnam and description of a new species from chu yang sin natural park (krong bong district, dac lac province), vietnam (2008) *Russian Journal of Herpetology*, 15, pp. 141-156
 - Ngo, V.T., Two new cave-dwelling species of *Cyrtodactylus* gray (squamata: Gekkonidae) from Southwestern vietnam (2008) *Zootaxa*, 1909, pp. 37-51
 - Ngo, V.T., Bauer, A.M., Descriptions of two new species of *Cyrtodactylus* gray, 1827 (squamata: Gekkonidae) endemic to Southern vietnam (2008) *Zootaxa*, 715, pp. 27-42
 - Ngo, V.T., Grismer, L.L., The first record of cardamom slender-toed gecko - *Cyrtodactylus intermedius* smith, 1917 in vietnam (2006) *Proceedings of the 5th Scientific Conference of University of Natural Science*, 2006, p. 328. , Ho Chi Minh City, 30 November
 - Ngo, V.T., Grismer, L.L., Grismer, J.L., A new endemic cave dwelling species of *Cyrtodactylus* gray, 1827 (squamata: Gekkonidae) in kien giang biosphere reserve, Southwestern vietnam (2008) *Zootaxa*, 1967, pp. 53-62
 - Nguyen, N.S., Orlov, N.L., Darevsky, I.S., Descriptions of two new species of the genus *Cyrtodactylus* gray, 1827 (squamata: Sauria: Gekkonidae) from Southern vietnam (2006) *Russian Journal of Herpetology*, 13, pp. 215-226
 - Orlov, N.L., Nguyen, Q.T., Nazarov, R.A., Ananjeva, N.B., Nguyen, N.S., A new species of the genus *Cyrtodactylus* gray, 1827 and redescription of *Cyrtodactylus paradoxus* (darevsky et szczerbak, 1997) [Squamata: Sauria: Gekkonidae] (2007) *Russian Journal of Herpetology*, 14, pp. 145-152
 - Palumbi, S.R., Martin, A., Romano, S., McMillan, W.O., Stice, L., Grabowski, G., (1991) *The Simple Fool's Guide to PCR*, p. 47. , Department of Zoology and Kewalo Marine Laboratory, Hawaii
 - Pauwels, O.S.G., Bauer, A.M., Sumonthai, M., Chanhom, L., *Cyrtodactylus thirakhupti* (squamata: Gekkonidae), a new cave-dwelling gecko from Southern Thailand (2004) *Zootaxa*, 772, pp. 1-11
 - Rösler, H., (1995) *Geckos der Welt*, p. 256. , Urania Verlag, Leipzig, Jena, Berlin
 - Rösler, H., Glaw, F., A new species of *Cyrtodactylus* gray, 1827 (squamata: Gekkonidae) from Malaysia including a literature survey of mensural and meristic data in the genus (2008) *Zootaxa*, 1729, pp. 8-22
 - Rösler, H., Vu, N.T., Nguyen, Q.T., Ngo, V.T., Ziegler, T., A new *Cyrtodactylus* (squamata: Gekkonidae) from central vietnam (2008) *Hamadryad*, 33 (1), pp. 48-63
 - Schmitz, A., (2003) *Taxonomic and Phylogenetic Studies on Scincid Lizards (Reptilia: Scincidae)*, p. 262. , Unpubl. PhD thesis. University of Bonn
 - Schmitz, A., Ineich, I., Chirio, L., Molecular review of the genus *Panaspis* sensu lato in cameroon, with special reference to the

status of the proposed subgenera (2005) *Zootaxa*, 863, pp. 1-28

- Smith, M.A., Reptiles and batrachians collected on pulo condore (1920) *The Journal of the Natural History Society of Siam*, 4, pp. 93-97
- Smith, M.A., New or little-known reptiles and batrachians from Southern annam (indo-China) (1921) *Proceedings of the Zoological Society of London*, pp. 423-440
- Smith, M.A., *The fauna of British India, including ceylon and burma* (1935) *Reptilia and Amphibia, II. Sauria*, p. 440. , Taylor & Francis, London
- Swofford, D.L., (2002) *PAUP*. Phylogenetic Analysis Using Parsimony (* and Other Methods)*, , Version 4.0b10. Sinauer Associates, Sunderland, Massachusetts, USA
- Taylor, E.H., *The lizards of Thailand* (1963) *University of Kansas Science Bulletin*, 44, pp. 687-1077
- Thompson, J.D., Gibson, T.J., Plewniak, F., Jeanmougin, F., Higgins, D.G., *The ClustalX windows interface: Flexible strategies for multiple sequence alignment aided by quality analysis tools* (1997) *Nucleic Acids Research*, 24, pp. 4876-4882
- Ulber, T., *Bemerkungen über cyrtodactyline geckos aus thailand nebst beschreibungen von zwei neuen arten (reptilia: Gekkonidae)* (1993) *Mitteilungen Aus Dem Zoologischen Museum in Berlin*, 69, pp. 187-200
- Ulber, T., Grossmann, W., *Ein weiterer neuer gecko aus zentral-thailand: Cyrtodactylus papilionoides sp. nov. (reptilia: Sauria: Gekkonidae)* (1991) *Sauria*, 13 (1), pp. 13-22
- Walsh, P.S., Metzger, D.A., Higuchi, R., *Chelex 100 as a medium for simple extraction of DNA for PCR-based typing from forensic material* (1991) *BioTechniques*, 10 (4), pp. 506-513
- Ziegler, T., Rösler, H., Herrmann, H.-W., Vu, N.T., *Cyrtodactylus phonghakebangensis sp. n., ein neuer bogenfingergecko aus dem annamitischen karstwaldmassiv, vietnam* (2002) *Herpetofauna*, 24, pp. 11-25
- Ziegler, T., Vu, N.T., *Ten years of herpetodiversity research in phong nha - Ke bang national park, central vietnam* (2009) *Phong Nha - Ke Bang National Park and Cologne Zoo, 10 Years of Cooperation (1999-2009)*, pp. 103-124. , Vo, V. T., Nguyen, T. D., Dang, N. K. & Pham, T. H. Y. (eds.) Quang Binh