Herpetology Notes 19: 353–355, published on 31 May 2026

First record of *Gekko* cf. *albofasciolatus* from Palawan Island, the Philippines

Kseniia M. Prondzynska[1] and Emerson Y. Sy[2,*]

The genus *Gekko* Laurenti, 1768 comprises a diverse radiation of gekkonid lizards across Southeast Asia, with the Philippine archipelago representing a major centre of diversity and endemism (Wood et al., 2020). Recent studies have demonstrated that Philippine *Gekko* diversity is substantially underestimated, with multiple new species described in the past decades and evidence for numerous cryptic evolutionary lineages (Brown and Alcala, 1978; Brown et al., 2008, 2009, 2011; Linkem et al., 2010). As currently understood, 13 out of 16 *Gekko* species occurring in the Philippines are endemic (Sy, 2023). Phylogeographic analyses further suggest that this diversity has been shaped by complex interactions between long-term island isolation, in situ diversification, and repeated dispersal events across the archipelago (Siler et al., 2012). Despite this, only a limited number of widespread or synanthropic *Gekko* species, such as *G. gecko* and *G. monarchus*, occur broadly across the Southeast Asian region, whereas most taxa exhibit restricted distributions and strong island group-level endemism.

Palawan Island is biogeographically distinct from much of the oceanic-origin Philippine archipelago and is widely regarded as part of Sundaland, sharing strong faunal affinities with Borneo (Esselstyn et al., 2009; Hall, 2009). This distinctiveness is also reflected in its herpetofauna, which exhibits considerable diversity and variation across habitats, with ongoing surveys continuing to reveal incomplete knowledge of species composition and distribution on Palawan (Supsup et al., 2020; Binaday et al., 2024). The gekkonid fauna of Palawan includes endemic taxa such as *G. athymus*, *G. gulat*, and *G. palawanensis*, further highlighting both the uniqueness of the island and its biogeographic connections to Sundaland, from which additional lineages may remain undocumented.

The *Gekko smithii* species complex represents a group of large-bodied, morphologically similar taxa distributed primarily in Sundaland, including Borneo, Sumatra, and the Malay Peninsula. Recent taxonomic revisions have revealed that this complex comprises multiple distinct species with more restricted geographic ranges than previously recognised (Grismer et al., 2022). To date, no representatives of the *G. smithii* species complex have been reported from the Philippines. Here, we report the first record of a member of this complex, tentatively assigned to *Gekko albofasciolatus* (Fig. 1A, 1B), from Palawan Island, the Philippines. This record represents a significant range extension for the group and raises

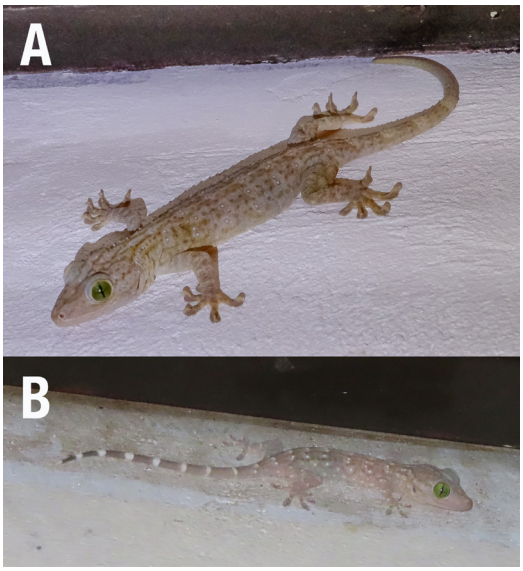

Figure 1. An adult *Gekko* cf. *albofasciolatus* (A) and a juvenile (B) exhibiting the characteristic green eyes. Photos by Emerson Y. Sy (A) and Kseniia Marianna Prondzynska (B).

[1] V.N. Karazin Kharkiv National University, Svobody Square 4, Kharkiv 61022, Ukraine.
[2] Philippine Center for Terrestrial & Aquatic Research, 1013 Manila, Philippines.
[*] Corresponding author. E-mail: emersonsy@gmail.com

questions regarding the biogeographic origin and mode of establishment of this population.

On 7–8 October 2024, KMP observed at least four individuals (two adults and two juveniles) of a large-bodied *Gekko* on the walls of an uninhabited cottage within a hotel complex at the forest edge in north of Puerto Princesa City, Palawan Province, Palawan Island, Philippines. The exact locality is withheld to prevent potential collection pressure, as visually distinctive and large-bodied reptiles are known to be targeted in the illegal wildlife trade, which has previously affected endemic taxa, including freshwater turtles and monitor lizards (e.g., Sy, 2012, 2020). The geckos were active at night and occupied vertical surfaces of the structure. The presence of juvenile individuals suggests that reproduction is occurring at the site. No individuals were captured or collected. Additional gecko species observed at the same locality included *G. monarchus*, *Gehyra mutilata*, *Hemidactylus frenatus*, and *H. platyurus*. EYS revisited the same locality on 14–15 March 2026 and observed two adult individuals, confirming the continued presence of this population.

The observed individuals can be readily assigned to the *G. smithii* species complex based on their large body size (comparable to *G. gecko*), white-tipped tubercles on dorsum, and the presence of conspicuous green eyes, a diagnostic feature of this group (Grismer et al., 2022). None of the other *Gekko* species known from the Philippines exhibit this combination of traits. In particular, *G. monarchus*, which was observed at the same locality, is considerably smaller, has a series of black spots on dorsum (vs. absence), and lacks the characteristic green eye colouration. Additionally, in *G. monarchus* the rostral scale contributes to the border of the nostril, whereas in the observed individuals the rostral does not form part of the nostril border, consistent with members of the *G. smithii* species complex. Within the *G. smithii* complex, the observed individuals most closely resemble *G. albofasciolatus* in overall morphology and colouration, although the Palawan individuals appear somewhat paler than typical Bornean specimens (I. Das, pers. comm.). This taxon is currently known from Borneo, which is geographically proximate to Palawan. However, due to the absence of genetic data and the recent taxonomic revision of the complex, which recognised multiple closely related species with subtle morphological differences, we conservatively assign the Palawan population to *Gekko* cf. *albofasciolatus* pending further study.

The origin of the *Gekko* cf. *albofasciolatus* population documented here remains uncertain. Human-mediated introduction cannot be excluded, as geckos are known to be transported beyond their native ranges through the transport of cargo, building materials, planting materials, and accidental translocation associated with other human activities. In particular, geckos may be transported as eggs deposited in crevices of construction materials or as individuals concealed within wood, ornamental plants, soil, or other cargo (e.g., Brisbane et al., 2021; Rocha et al., 2022). The occurrence of this population on a building within a hotel complex further supports the plausibility of such introduction pathways. However, such introductions are most frequently documented in smaller, synanthropic species (e.g., *Hemidactylus frenatus*), whereas large-bodied arboreal taxa are less commonly reported in this context (Somaweera, 2020; Rocha et al., 2022). Although large geckos such as *G. gecko* have been introduced outside their native range, for example in Brazil and the USA (Florida), often via the pet trade and intentional or accidental release (Rocha, 2015; Fieldsend et al., 2025), this pathway appears less likely in the present case given the remote nature of the locality.

Alternatively, the presence of a member of the *Gekko smithii* species complex in Palawan may reflect natural biogeographic patterns. The occurrence of Sundaic lineages in Palawan has been documented across other vertebrate groups (Esselstyn et al., 2009), and phylogeographic studies of Philippine *Gekko* suggest that dispersal and historical connectivity have played important roles in shaping their current distributions (Siler et al., 2012). In this context, the presence of a previously undocumented member of the *G. smithii* complex in Palawan may represent either a naturally occurring but overlooked population or an introduced species. Further research is required to clarify the taxonomic identity of this population. Especially molecular data will be necessary to determine its relationship to other members of the *Gekko smithii* complex and to assess whether it represents an introduced population or part of the native fauna of Palawan.

Acknowledgments. We thank Indraneil Das for his valuable comments on the manuscript and for sharing insights on the colouration of *Gekko albofasciolatus* from Borneo Island.

References

Binaday, J.W., Sarmiento, M.J.R., Tupas, J.M., Corvera, M.D., Tabayag, E.A., Cruz, R.M., Manalo, R.I. (2025): Species account of amphibians and reptiles in the eastern slope of Mt.

Bulanjao Mountain Range, southern Palawan, the Philippines, with a new geographic range for the Palawan Eastern Frog *Alcalus mariae* (Inger, 1954). Philippine Journal of Science **153**(6B): 2253–2271.

Brisbane, J.L.K., Dewynter, M., Angin, B., Questel, K., van den Burg, M.P. (2021): Importation of ornamental plants facilitates establishment of the Common House Gecko, *Hemidactylus frenatus* Duméril & Bibron, in the Lesser Antilles. Caribbean Herpetology **77**: 1–5.

Brown, W.C., Alcala, A.C. (1978): Philippine Lizards of the Family Gekkonidae. Dumaguete City, Philippines, Silliman University Press. 146 pp.

Brown, R.M., Oliveros, C.H., Siler, C.D., Diesmos, A.C. (2008): A new *Gekko* from the Babuyan Islands, northern Philippines. Herpetologica **64**: 305–320.

Brown, R.M., Oliveros, C., Siler, C.D., Diesmos, A.C. (2009): Phylogeny of *Gekko* from the northern Philippines, and description of a new species from Calayan Island. Journal of Herpetology **43**: 620–635.

Brown, R.M., Siler, C.D., Oliveros, C.H., Diesmos, A.C., Alcala, A.C. (2011): A new *Gekko* from Sibuyan Island, central Philippines. Herpetologica **67**: 460–476.

Esselstyn, J.A., Timm, R.M., Brown, R.M. (2009): Do geological or climatic processes drive speciation in dynamic archipelagos? The tempo and mode of diversification in Southeast Asian Shrews. Evolution **63**: 2595–2610.

Fieldsend, T.W., Rösler, H., Krysko, K.L., Harman, M.E.A., Mahony, S., Collins, T.M. (2025): Genotypic and phenotypic evidence reveals the introduction of two distinct forms of the non-native reptile *Gekko gecko* to southern Florida. Herpetological Journal **35**(4): 287–298.

Grismer, L.L., Del Pinto, L., Quah, E.S.H., Anuar, S., Cota, M., McGuire, J.A., et al. (2022): Phylogenetic and multivariate analyses of *Gekko smithii* Gray, 1842 recover a new species from Peninsular Malaysia and support the resurrection of *G. albomaculatus* (Giebel, 1861) from Sumatra. Vertebrate Zoology **72**: 47–80.

Hall, R. (2009): Southeast Asia's changing palaeogeography. Blumea **54**: 148–161.

Linkem, C.W., Siler, C.D., Diesmos, A.C., Sy, E., Brown, R.M. (2010): A new species Of *Gekko* (Squamata: Gekkonidae) from central Luzon Island, Philippines. Zootaxa. **2396**: 37–49.

Rocha, J.C., Jr., Piva, A., Batista, J., Machado, D.C. (2015): Occurrence of the Tokay *Gecko Gekko* gecko (Linnaeus 1758) (Squamata, Gekkonidae), an exotic species in southern Brazil. Herpetology Notes **8**: 8–10.

Rocha, S., Trinks, A., Harris, D.J., Larson, G., Cheke, A.S. (2022): The global and western Indian Ocean dispersal of House Geckos from Asia using historical and Mitochondrial DNA perspectives. Frontiers in Ecology and Evolution **10**: 791762.

Siler, C.D., Oaks, J.R., Welton, L.J., Linkem, C.W., Swab, J.C., Diesmos, A.C., Brown, R.M. (2012): Did geckos ride the Palawan raft to the Philippines? Journal of Biogeography **39**: 1217–1234.

Somaweera, R. (2020): Historical context, current status and management priorities for introduced Asian house geckos at Ashmore Reef, north-western Australia. BioInvasions Records **9**: 408–420.

Supsup, C.E., Asis, A.A., Carestia, U.V., Jr., Diesmos, A.C., Mallari, N.A.D., Brown, R.M. (2020): Variation in species richness, composition and herpetological community structure across a tropical habitat gradient of Palawan Island, Philippines. Herpetozoa **33**: 95–111.

Sy, E.Y. (2012): First Record of *Varanus bitatawa* in the Philippine Pet Trade. Biawak **6**(2): 73.

Sy, E.Y., Schoppe, S., Diesmos, M.L., Lim, T.M., Diesmos, A. (2020): Endangered by trade: seizure analysis of the critically endangered Philippine Forest Turtle *Siebenrockiella leytensis* from 2004–2018. Philippine Journal of Systematic Biology **14**(2): 1–8.

Sy, E.Y. (2023): A naturalist's guide to the reptiles of the Philippines. Oxford, England, UK, John Beaufoy Publishing. 176 pp.

Wood, P.L., Jr., Guo, X.G., Travers, S.L., Su, Y.-C., Olson, K.V., Bauer, A.M., et al. (2020): Parachute geckos free fall into synonymy: *Gekko* phylogeny, and a new subgeneric classification, inferred from thousands of ultraconserved elements. Molecular Phylogenetics and Evolution **146**: 106731.

Accepted by Frederic Griesbaum