

First published record of Asian Palm Civet, *Paradoxurus philippinensis* in Mt. Arayat National Park, Pampanga province, Philippines

Yu-Sing LIN & Ace Kevin S. AMARGA <u>linyusing89329@gmail.com</u> (Lin), <u>ace_amarga061@yahoo.com</u> (Amarga)

Collaborators: Hui-Yun Tseng, Jing-Fu Tsai, Yu-Feng Hsu, Erin Krichilsky, Zong-Yu Shen, Shan-Min Chen, Larry Cahilog, Luisito Terbio.
Photographs by: Yu-Sing Lin.
Subject identified by: Ace Kevin S. Amarga, Desamarie Antonette P. Fernandez.

Location: Mt. Arayat National Park, Magalang municipality, Pampanga province, Luzon Island, Philippines (15°12′19.4″ N, 120°44′09.6″ E)
Elevation: 650-700 metres ASL.
Habitat: Lowland secondary forest.
Date and time: 04 July 2023, 19:17 hrs.

Identity of subject: Asian Palm Civet, Paradoxurus philippinensis (Mammalia: Carnivora: Viverridae).

Description of record: During a short biodiversity survey an adult *Paradoxurus philippinensis* was spotted and photographed resting on a tree branch approximately 10 meters above the ground (Fig. 1) in lowland secondary forest (Fig. 2).



Fig. 1. Adult Paradoxurus philippinensis

© Yu-Sing Lin



Fig. 2. Lowland secondary forest, Mt. Arayat National Park

© Yu-Sing Lin

Remarks:

The photograph (Fig. 1) clearly shows an Asian Palm Civet (*Paradoxurus philippinensis* Jourdan), one of two civet species occurring in the Philippines; the other extant species is *Viverra tangalunga* Gray (Heaney et al. 2016). The former was first described as *Viverra hermaphrodita* by the German zoologist Peter Simon Pallas (Pallas, 1777). Subsequently, the French zoologist Claude Jourdan described *Paradoxurus philippinensis* from specimens collected from Luzon & Mindanao islands (Jourdan, 1837). Many published accounts of Asian Palm Civet in the Philippines were under the name *P. hermaphroditus* (e.g., Heideman et al., 1987; Heaney et al., 1991, 1999, 2006; Esselstyn et al., 2004; Marler et al., 2018) while some references used *P. philippinensis* (e.g., Thomas, 1909; Timm & Birney, 1980; Gruezo & Soligam, 1990). However, based on genetic analyses of *Paradoxurus* civets, Veron et al. (2015) suggested that the Asian Palm Civet occurring in the Philippines is *P. philippinensis*, along with those occurring in Borneo and Mentawai Islands (Indonesia).

Paradoxurus philippinensis tends to occupy a wide range of habitats including primary and secondary forests, as well as agroforests and cultivated lands such as coconut and coffee plantations. This species is omnivorous and has been reported to utilize a variety of food items including *Ficus* spp., wild banana, palm fruits (e.g., *Saribus rotundifolius* and *Pinanga insignis*) as well as invertebrates and vertebrates (Gruezo & Soligam, 1990; Heaney et al., 2016; de Guia et al., 2020). Due to their predominantly frugivorous diet, *P. philippinensis* plays an important role in forest regeneration via fruit and seed dispersal. In terms of distribution, this species is found across the Philippine archipelago and has been recorded on several islands including Basilan, Catanduanes, Dinagat, Luzon, Mindanao, Mindoro, Negros, Palawan, and Panay (Günther, 1879; Timm & Birney, 1980; Heideman et al., 1987; Esselstyn et al., 2004; Heaney et al., 1991, 2006, 2016).

Despite being a renowned protected area, Mt. Arayat volcano lacks published documentation and checklists of several faunistic groups. To our knowledge, this account represents the first published record of the Asian Palm Civet (*P. philippinensis*) in Mt. Arayat National Park. Furthermore, additional ecological research on population trends, dietary items and threats is recommended to further understand the natural history of *P. philippinensis* in Mt. Arayat National Park.

Permit: This research was authorized by the Department of Environment and Natural Resources - Biodiversity Management Bureau (DENR-BMB) under the Wildlife Gratuitous Permit No. 320.

Acknowledgments: The authors would like to thank the following colleagues and institutions: DENR-BMB for providing fieldwork permits; Mt. Arayat Expedition Team 2023 for various field assistance: Dr. Hui-Yun Tseng, Dr. Jing-Fu Tsai, Dr. Yu-Feng Hsu, Erin Krichilsky, Zong-Yu Shen, Shan-Min Chen and Larry Cahilog; Wilson Xavier Eloreta (DENR III Regional Office) & Luisito Terbio (Pampanga State Agricultural University) for accommodation and fieldwork logistics.

References:

De Guia, A.P.O., Chavez, G.C.S., Fernandez, D.A.P. (2020) Distribution and diet of the common palm civet (*Paradoxurus philippinensis*) in the Mt. Makiling Forest Reserve, Luzon Island, Philippines. Philippine Science Letters 13(1): 28-33.

Esselstyn, J.A., Widmann, P., and Heaney, L.R. (2004) The mammals of Palawan Island, Philippines. Proceedings of the Biological Society of Washington 117(3): 271-302.

Gruezo, W.S. and Soligam, A.C. (1990) Identity and germination of seeds from feces of the Philippine palm civet (*Paradoxurus philippinensis* Jourdan). Natural History Bulletin of the Siam Society 38: 69-82.

Günther, A.C.L.G. (1879) List of the mammals, reptiles and batrachians sent by Mt. Everett from the Philippine islands. Proceedings of the Zoological Society London 1879: 74-79.

Heaney, L.R., Balete, D.S., and Rickart, E.A. (2016) The Mammals of Luzon Island: Biogeography and Natural History of a Philippine Fauna. Johns Hopkins University Press., Maryland, USA, 287 pp.

Heaney, L.R., Balete, D.S., Rickart, E.A., Utzurrum, R.C.B. and Gonzales, P.C. (1999) Mammalian diversity on Mount Isarog, a threatened center of endemism on Southern Luzon Island, Philippines. Fieldiana Zoology 95: 1-62.

Heaney, L.R., Gonzales, P.C., Utzurrum, R.C.B., Rickart, E.A. (1991) The mammals of Catanduanes Island: implications for the biogeography of small land-bridge islands in the Philippines. Proceedings of the Biological Society of Washington 104(2): 399-415.

Heaney, L.R., Tabaranza Jr., B.R., Rickart, E.A., Balete, D.S., Ingle, N.R. (2006). The mammals of Mt. Kitanglad Nature Park, Mindanao, Philippines. Fieldiana Zoology 112: 1-63.

Heideman, P.D., Heaney, L.R., Thomas, R.L., Erickson, K.R. (1987) Patterns of faunal diversity and species abundance of non-volant small mammals on Negros Island, Philippines. Journal of Mammalogy 68(4): 884-888.

Jourdan, C. (1837) Mémoire sur quelques mammifères nouveaux. Comptes Rendus de l'Academie des Sciences 5(15): 521-524.

Marler, P.N., Jose, E.D., Castro, L.S.G., Gonzalez, J.B. (2018) Mammals of Cleopatra's Needle Critical Habitat: Outcomes of a rapid assessment. The Palawan Scientist 10: 84-103.

Pallas, P.C. (1777) Das Zwitterstinkthier. In: Schreber, J.C.D. (ed.) Die Säugethiere in Abbildungen nach der Natur, mit Beschreibungen. Erlangen: Wolfgang Walther, p. 426.

Thomas, O. (1909) New species of *Paradoxurus*, of the *P. philippinensis* group, and a new *Paguma*. Annals and Magazine of Natural History 3(16): 374-377.

Timm, R.M. and Birney, E.C. (1980) Mammals collected by the Menage Scientific Expedition to the Philippine Islands and Borneo, 1890-1893. Journal of Mammalogy 61(3): 566-571.

Veron, G., Patou, M.-L., Tóth, M., Goonatilake, M., Jennings, A.P. (2015) How many species of *Paradoxurus* civets are there? New insights from India and Sri Lanka. Journal of Zoological Systematics and Evolutionary Research 53(2): 161-174.