

## Short Communication: First Report of Long-tailed Macaque (*Macaca fascicularis*) at Logending Beach, Indonesia

ROSYID RIDLO AL HAKIM<sup>1</sup>, RIZALDI<sup>2</sup>, ERIE KOLYA NASUTION<sup>3</sup>, SITI RUKAYAH<sup>3</sup>

<sup>1</sup>Primate Study Program, Graduate School, IPB University  
Jl. Raya Darmaga Bogor, Indonesia. 16680  
Email: alhakimrosyid@apps.ipb.ac.id

<sup>2</sup>Department of Biology, Faculty of Mathematic and Natural Sciences, Andalas University  
Limau Manis Padang, Indonesia. 25163  
Email: rizaldi@sci.unand.ac.id

<sup>3</sup>Faculty of Biology, Universitas Jenderal Soedirman  
Jl. Dr. Soeparno 63 Purwokerto, Indonesia. 53122  
Email: erie.nasution@unsoed.ac.id; siti.rukayah@unsoed.ac.id

### ABSTRACT

This short communication study reports the first report of the latest condition of long-tailed macaques in Logending Beach (Pantai Logending), Indonesia. Observations were carried out in August 2021. The observation location is close to several community stalls selling around the beach and the leading portal to enter the Logending Beach area. The long-tailed macaque found by observers is still within a distance (<1 km) from the primary forest bordering the Logending Beach. Several long-tailed macaque individuals encountered during the findings and field observations may be separated from the leading group. The body condition of some long-tailed macaques found during the observation seems to be quite good, but the findings have been that there has been human-primate interaction in the form of provisioning food. These observations and findings are still not sufficient to prove the original habitat of long-tailed macaques, so to prove the size of the long-tailed macaque group in Logending Beach and its surroundings, further research is needed as well as to confirm the food diet and anthropogenic influences that occur between long-tailed macaques and residents around at Logending Beach.

Keywords: anthropogenic; dietary food; habitat; population; primates

### INTISARI

Studi *short communication* ini melaporkan laporan pertama kondisi terakhir keberadaan monyet ekor panjang yang berada di Pantai Logending, Kebumen, Jawa Tengah, Indonesia. Observasi dilakukan pada bulan Agustus 2021. Lokasi observasi berdekatan dengan beberapa warung-warung warga yang berjualan di sekitar pantai dan dekat dengan portal utama masuk ke wilayah Pantai Logending. Temuan monyet ekor panjang yang dijumpai oleh pengamat masih dalam jarak (<1 km) dari hutan primer yang berbatasan dengan Pantai Logending. Beberapa individu monyet ekor panjang yang dijumpai selama temuan dan observasi di lapangan dimungkinkan merupakan individu-individu yang terpisah dari kelompok utamanya. Kondisi tubuh beberapa monyet ekor panjang yang dijumpai selama observasi terlihat masih cukup baik, namun temuan yang ada telah terjadi interaksi manusia dengan monyet ekor panjang, berupa pemberian *provisioning food*. Hasil temuan dan observasi ini masih belum cukup untuk membuktikan habitat asli monyet ekor panjang sehingga untuk membuktikan ukuran kelompok monyet ekor panjang yang berada di Pantai Logending dan sekitarnya perlu penelitian lebih lanjut serta untuk membuktikan diet makanan dan pengaruh antropogenik yang terjadi antara monyet ekor panjang dengan warga sekitar di Pantai Logending.

Kata kunci: antropogenik; diet pakan; habitat; populasi; primata

### INTRODUCTION

Long-tailed macaque (*Macaca fascicularis* Raffles) is one of the non-human primate (NHP) species with an extensive habitat distribution (Chatpiyaphat & Boonratana, 2013). According to (Supriatna & Wahyono, 2000), distribution of long-tailed

macaques can be found in Southeast Asia (Indonesia (Gursky-Doyen & Supriatna, 2010; Kyes, 1993; Supriatna & Wahyono, 2000), Malaysia (Karimullah & Anuar, 2012; Rovie-Ryan *et al.*, 2021; Supriatna & Wahyono, 2000; Syah, 2020), Philippines (Liedigk *et al.*, 2015; Rovie-Ryan *et al.*, 2021; Supriatna &

Wahyono, 2000), Myanmar (Luncz *et al.*, 2017; Supriatna & Wahyono, 2000), Thailand (Chatpiyaphat & Boonratana, 2013; Supriatna & Wahyono, 2000), Vietnam (Roos *et al.*, 2013; Supriatna & Wahyono, 2000; Tsuji *et al.*, 2013), Cambodia (Hansen *et al.*, 2021; Roos *et al.*, 2013; Supriatna & Wahyono, 2000)). Habitat characteristics of long-tailed macaques that can support their lives like in an evergreen forest (Al Hakim & Nasution, 2021; Chatpiyaphat & Boonratana, 2013; Hidayat *et al.*, 2019; Ilham *et al.*, 2017), agricultural land (Brotcorne, 2014; Chatpiyaphat & Boonratana, 2013; Luncz *et al.*, 2017), swamp (Chatpiyaphat & Boonratana, 2013), beach (Chatpiyaphat & Boonratana, 2013; Mohd-Azlan *et al.*, 2017), mangrove (Ain-Najwa *et al.*, 2020; Baihaqi *et al.*, 2017; Chatpiyaphat & Boonratana, 2013), riverside forest (Chatpiyaphat & Boonratana, 2013), park (Chatpiyaphat & Boonratana, 2013), anthropogenic land (Chatpiyaphat & Boonratana, 2013; Supriatna & Wahyono, 2000), national park (Brotcorne *et al.*, 2014; Lane-degraaf *et al.*, 2010; Nasution & Rukayah, 2018; Supriatna & Wahyono, 2000), and temple (Brotcorne *et al.*, 2017; Saputra *et al.*, 2014). IUCN reported for the last report conservation status of long-tailed macaque is vulnerable (Eudey *et al.*, 2020).

In Indonesia, the habitat of long-tailed macaques, especially on the island of Java, can be found in the Banten (Purbatrapsila *et al.*, 2012; Suwarno, 2014), West Java (Kyes, 1993; Kyes *et al.*, 1998; Laksana *et al.*, 2017; Supartono, 2019), Central Java (Al Hakim & Nasution, 2021; Nasution *et al.*, 2021; Nasution & Rukayah, 2018; Syah, 2020), East Java (Hansen *et al.*, 2020). Long-tailed macaques were found around Logending Beach, Indonesia. Then we searched for references from various scientific articles but did not find any concerns that said there was a long-tailed macaque habitat there. This short communication study will report the first report of the latest condition of the existence of long-tailed macaques in Logending Beach (Pantai Logending), Indonesia.

## RESEARCH METHODS

### Observations and Findings

The location (study site) where the long-tailed macaque was found was around Logending Beach (also known Pantai Logending in Indonesian), Kebumen Regency, Central Java, Indonesia. Observations were made in August 2021. The study site can be seen in Figure 1.

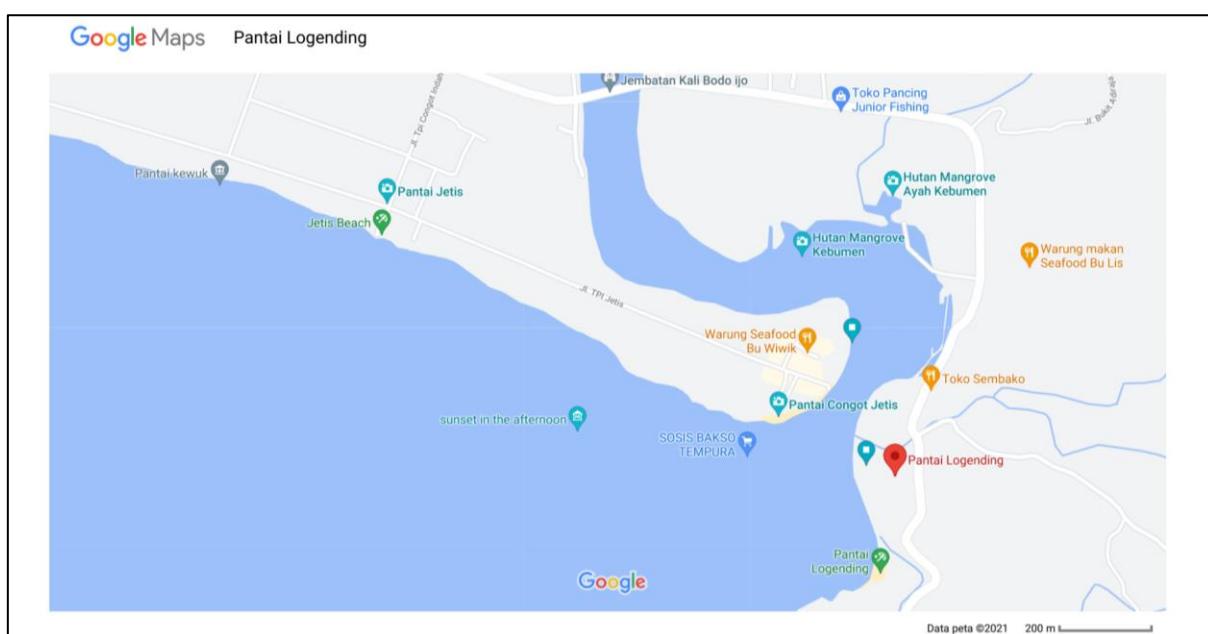


Figure 1. Study site (Source: Google Maps, 2021)

Based on Figure 1, the location of Logending Beach is near the Ayah Mangrove Forest and the Kebumen Mangrove Forest. The coordinates are located at 7°43'30.7"S 109°23'37.3"E, with terrain conditions at an elevation of 5 meters. Observations were made as far as 23.44 meters from the first point of encounter with long-tailed macaques in the direction of 217°, where this observation line is the observation path for long-tailed macaques until they disappear from observation. The long-tailed macaques found they traced the observation area with a radius of 9.44 meters with an area of 281.28 m<sup>2</sup> and a circumference of 59.35 meters (Figure 2). The observation location is close to several local stalls selling

around the beach and the leading portal to enter the Logending Beach area. The long-tailed macaque found by observers is still within a distance (<1 km) from the primary forest bordering the Logending Beach. This primary forest is protected by the Regional Nature Conservation Agency; Indonesia (BKSDA Jateng) because the slogan for the prohibition of hunting for wild animals was found. There is not enough evidence to prove the long-tailed macaque's home range reaches this primary forest, but there is a tendency for other long-tailed macaques to be in this primary forest. Further research is needed to prove the existence of long-tailed macaques in this primary forest bordering Logending Beach.



Figure 2. Long-tailed macaque observation line (Source: Google Earth, 2021).

## RESULT AND DISCUSSION

Based on the findings and observations made in the field, several long-tailed macaques were found around Logending Beach, with the observation findings as shown in Figure 2. Some of these long-tailed macaques were found to be dominated by juveniles and one adult male. It is unknown whether the adult male today is an alpha male because the initial

findings are not enough to confirm the individual with the alpha hierarchy. However, during the observation, residents provided provisioning food in the form of crackers, and in this case, an adult male always managed to get it. Figure 3 is documentation that supports this argument, with other individuals watching only adult males eating crackers.



Figure 3. The adult male long-tailed macaque was caught on camera eating provisioning food (crackers).

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In Figure 3, it can be seen that the location where the long-tailed macaque was found on Logending Beach is very close to the protected primary forest. Several long-tailed macaques encountered during the findings and field observations may be individuals separated from the leading group. It is unknown whether the leading group of long-tailed macaques is in the primary forest or other locations. Further research is needed to prove the group of long-tailed macaques in Logending Beach and its surroundings.

The body condition of several long-tailed macaques that were found during the observation was not too fat and not too thin, whether the food in the form of provisioning food from residents when they were found during the findings was not often done or even done often, but this is only a temporary argument that assumes that the habitat conditions of the long-tailed macaques still have food resources, because the body postures seen in several individual findings of these long-tailed macaques support the type of their diet. Regarding food diet, some individual long-tailed macaques encountered during this observation may be looking for additional food or indeed their initial location has started to decrease in food resources, or this is their

routine agenda every day visiting Logending Beach to expect provisioning food from residents because, during the observations and findings, residents who provided provisioning food seemed to be very accustomed to giving crackers to these long-tailed macaques, but further research is needed to prove the diet and anthropogenic effects that occur between long-tailed macaques and residents in Logending Beach.

## CONCLUSION

Our observations and findings found that several long-tailed macaques at Logending Beach proved that Logending Beach was not their primary habitat. Still, there was a tendency for their original habitat to be in the primary forest directly adjacent to the beach. The encounters between long-tailed macaques and residents prove that the residents are used to providing provisioning food to long-tailed macaques. We suggest a need for further research or follow-up on these findings to confirm bioecology related to habitat conditions, dietary variations, and anthropogenic factors between long-tailed monkeys and residents or beach visitors.

## ACKNOWLEDGEMENTS

We are grateful to Ardhini Rin Maharning, Ph.D.; Dr.rer.nat. Erwin Riyanto Ardli; and Romanus Edy Prabowo, Ph.D., who has provided smoothness and support in implementing observations.

## REFERENCES

- Ain-Najwa, M. Y., Yasmin, A. R., Arshad, S. S., Omar, A. R., Abu, J., Kumar, K., Mohammed, H. O., Natasha, J. A., Mohammed, M. N., Bande, F., Abdullah, M. L., & Rovie-Ryan, J. J. 2020. Exposure to zoonotic west nile virus in long-tailed macaques and bats in peninsular Malaysia. *Animals*. vol. 10(12): 1–13. <https://doi.org/10.3390/ani10122367>.
- Al Hakim, R. R., & Nasution, E. K. 2021. Psychological Stressor Caused Alpha-Male Non-Human-Primate *Macaca fascicularis* to Become Agonistic When Struggling Over Food. *Journal of Psychological Perspective*. vol. 3(1): 41–45. <https://doi.org/10.47679/jopp.311152021>.
- Baihaqi, A., Setia, T. M., Sugardjito, J., & Lorenzo, G. 2017. Penggunaan pohon tidur monyet ekor panjang (*Macaca fascicularis*) di Hutan Lindung Angke Kapuk dan Ekowisata Mangrove Pantai Indah Kapuk Jakarta. *Al-Kauniyah: Journal of Biology*. vol. 10(1): 35–41.
- Brotcorne, F. 2014. Behavioral ecology of commensal long-tailed macaque (*Macaca fascicularis*) populations in Bali, Indonesia: impact of anthropic factors. [Doctoral Dissertation]. Belgium: Université de Liège.
- Brotcorne, F., Giraud, G., Gunst, N., Fuentes, A., Wandia, I. N., Beudels-Jamar, R. C., Poncin, P., Huynen, M. C., & Leca, J. B. 2017. Intergroup variation in robbing and bartering by long-tailed macaques at Uluwatu Temple (Bali, Indonesia). *Primates*. vol. 58(4): 505–516. <https://doi.org/10.1007/s10329-017-0611-1>.
- Brotcorne, F., Maslarov, C., Wandia, I. N., Fuentes, A., Beudels-Jamar, R. C., & Huynen, M. C. 2014. The role of anthropic, ecological, and social factors in sleeping site choice by long-tailed Macaques (*Macaca fascicularis*). *American Journal of Primatology*. vol. 76(12): 1140–1150. <https://doi.org/10.1002/ajp.22299>.
- Chatpiyaphat, K., & Boonratana, R. 2013. A previously unreported long-tailed macaque (*Macaca fascicularis*) population in Bangkok, Thailand. *Asian Primates Journal*. vol. 3(1): 24–28.
- Eudey, A., Kumar, A., Singh, M., & Boonratana, R. 2020. *Macaca fascicularis*. The IUCN Red List of Threatened Species 2020: e.T12551A17949449. vol. 8235. <https://doi.org/https://dx.doi.org/10.2305/IUCN.UK.2020-2.RLTS.T12551A17949449.en>.
- Gursky-Doyen, S., & Supriatna, J. 2010. Indonesian Primates. In *Developments in Primatology: Progress and Prospects*. Springer Science. [https://doi.org/10.1007/978-1-4419-1560-3\\_22](https://doi.org/10.1007/978-1-4419-1560-3_22).
- Hansen, M. F., Ellegaard, S., Moeller, M. M., Van Beest, F. M., Fuentes, A., Nawangsari, V. A., Groendahl, C., Frederiksen, M. L., Stelvig, M., Schmidt, N. M., Traeholt, C., & Dabelsteen, T. 2020. Comparative home range size and habitat selection in provisioned and non-provisioned long-tailed macaques (*Macaca fascicularis*) in Baluran National Park, East Java, Indonesia. *Contributions to Zoology*. vol. 89(4): 393–411. <https://doi.org/10.1163/18759866-bja10006>.
- Hansen, M. F., Gill, M., Nawangsari, V. A., Sanchez, K. L., Cheyne, S. M., Nijman, V., & Fuentes, A. 2021. Conservation of Long-tailed Macaques: Implications of the Updated IUCN Status and the CoVID-19 Pandemic. *Primate Conservation*. vol. 35: 1–11.
- Hidayat, A., Rizaldi, R., & Nurdin, J. 2019. Jaringan Sosial (Social Network) Antar Jantan Monyet Ekor Panjang (*Macaca fascicularis*) Di Gunung Meru, Padang, Sumatera Barat. *Jurnal Biologi UNAND*. vol. 7(1): 14–20. <https://doi.org/10.25077/jbioua.7.1.14-20.2019>.
- Ilham, K., Rizaldi, Nurdin, J., & Tsuji, Y. 2017. Status of urban populations of the long-tailed macaque (*Macaca fascicularis*) in West Sumatra, Indonesia. *Primates*. vol. 58(2): 295–305. <https://doi.org/10.1007/s10329-016-0588-1>.
- Karimullah, & Anuar, S. 2012. The dominant species of monkeys (*Macaca fascicularis*) in northern region of peninsular Malaysia. *Pakistan Journal of Zoology*. vol. 44(6): 1567–1574.
- Kyes, R. C. 1993. Survey of the long-tailed macaques introduced onto Tinjil Island, Indonesia. *American Journal of Primatology*. vol. 31(1): 77–83. <https://doi.org/10.1002/ajp.1350310108>.
- Kyes, R. C., Sajuthi, D., Iskandar, E., Iskandriati, D., Pamungkas, J., & Crockett, C. M. 1998. Management of a natural habitat breeding colony of long-tailed macaques. *Tropical Biodiversity*. vol. 5(2): 127–137.
- Laksana, M. R. P., Rubiati, V. S., & Partasasmita, R. 2017. Struktur populasi monyet ekor panjang (*Macaca fascicularis*) di Taman Wisata Alam Pananjung Pangandaran, Jawa Barat. *Prosiding Seminar Nasional Masyarakat Biodiversitas Indonesia*. 3(2), 224–229. <https://doi.org/10.13057/psnmbi/m030211>.
- Lane-degraaf, K., Lute, M. L., Coyote, P., Rompis, A., Wandia, I. N., Putra, I. G. A. A., Hollocher, H., & Fuentes, A. 2010. Pests, Pestilence, and People: The Long-Tailed Macaque and Its Role in the Cultural Complexities of Bali. In *Indonesian Primates* (pp. 235–248). <https://doi.org/10.1007/978-1-4419-1560-3>.

- Liedigk, R., Kolleck, J., Böker, K. O., Meijaard, E., Md-Zain, B. M., Abdul-Latiff, M. A. B., Ampeng, A., Lakim, M., Abdul-Patah, P., Tosi, A. J., Brämeier, M., Zinner, D., & Roos, C. 2015. Mitogenomic phylogeny of the common long-tailed macaque (*Macaca fascicularis fascicularis*). *BMC Genomics.* vol. 16(1): 1–11. <https://doi.org/10.1186/s12864-015-1437-0>.
- Luncz, L. V., Svensson, M. S., Haslam, M., Malaivijitnond, S., Proffitt, T., & Gumert, M. 2017. Technological response of wild macaques (*Macaca fascicularis*) to anthropogenic change. *International Journal of Primatology.* vol. 38(5): 872–880. <https://doi.org/10.1007/s10764-017-9985-6>.
- Mohd-Azlan, J., Messerli, Z., & Yi, M. C. K. 2017. Habitat occupancy and activity patterns of the long-tailed macaques and pig-tailed macaques in Sarawak, Borneo. *Malayan Nature Journal.* vol. 69(June): 277–285.
- Nasution, E. K., & Rukayah, S. 2018. Daily activities of long tail monkeys (*Macaca fascicularis* Raffles) in Cikakak Tourist Resort Wangon Banyumas (a Conservation Effort). *The SEA+ Conference on Biodiversity and Biotechnology 2018:* 1–5. <https://doi.org/10.1088/17551315/593/1/012004>.
- Nasution, E. K., Rukayah, S., & Al Hakim, R. R. 2021. Ecological study about long-tailed macaques (*Macaca fascicularis* Raffles) as potential tourism spot. *International Journal of Scientific Research in Biological Sciences.* vol. 8(4): 6–11.
- Purbatrapsila, A., Iskandar, E., & Pamungkas, J. 2012. Pola aktivitas dan stratifikasi vertikal oleh Monyet Ekor Panjang (*Macaca fascicularis* Raffles, 1821) di Fasilitas Penangkaran Semi Alami Pulau Tinjil. *Zoo Indonesia.* vol. 21(1): 39-47. <https://doi.org/10.52508/ZI.V21I1.2349>.
- Roos, C., Boonratana, R., Supriatna, J., Fellowes, J., Rylands, A., & Mittermeier, R. 2013. An updated taxonomy of primates in Vietnam, Laos, Cambodia and China. *Vietnamese Journal of Primatology.* vol. 2(2): 13–26.
- Rovie-Ryan, J. J., Khan, F. A. A., & Abdullah, M. T. 2021. Evolutionary pattern of *Macaca fascicularis* in Southeast Asia inferred using Y-chromosomal gene. *BMC Ecology and Evolution.* vol. 21(1): 1–12. <https://doi.org/10.1186/s12862-021-01757-1>.
- Saputra, K. G. W., Watiniyah, N. L., & Ginantra, I. K. 2014. Aktivitas harian Kera Ekor Panjang (*Macaca fascicularis*) di Taman Wisata Alam Sangeh, Kabupaten Badung, Bali. *Jurnal Biologi Udayana.* vol. 18(1): 14–18.
- Supartono, T. 2019. Gangguan Monyet Ekor Panjang (*Macaca fascicularis*) dan Lutung (*Trachypithecus auratus*) Di Hutan Blok Argasari, Kabupaten Kuningan, Jawa Barat. *Prosiding Seminar Nasional dan Call for Papers "Pengembangan Sumber Daya Perdesaan dan Kearifan Lokal Berkelanjutan IX"* 19-20 November 2019, Purwokerto, vol. 1, 53–62.
- Supriatna, J., & Wahyono, E. H. 2000. *Panduan Lapangan Primata Indonesia.* Yogyakarta: Yayasan Obor Indonesia.
- Suwarno, S. 2014. Studi Perilaku Harian Monyet Ekor Panjang (*Macaca fascicularis*) di Pulau Tinjil. *Seminar Nasional XI Pendidikan Biologi FKIP UNS 2014* (pp. 544–546).
- Syah, M. J. 2020. Long-Tailed Macaques (*Macaca fascicularis*) and humans interactions in Grojogan Sewu Natural Park (TWA GS), Karanganyar Regency, Central Java Province. *Al-Hayat: Journal of Biology and Applied Biology.* vol. 3(1), 31-36. <https://doi.org/10.21580/ah.v3i1.6069>.
- Tsuji, Y., Minh, N. Van, & Kitamura, S. 2013. Seed dispersal by rhesus macaques (*Macaca mulatta*) in Son Tra Nature Reserve, Central Vietnam: A preliminary report. *Vietnamese Journal of Primatology.* vol. 2(2): 65–73.