

## Biodiversity Record: Anomalous external genital presentation in a long-tailed macaque

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**Subject:** Long-tailed macaque, *Macaca fascicularis* (Mammalia: Primates: Cercopithecidae).

**Subject identified by:** Leroy Rocky Alphonso and Chan Yu An.

**Location, date and time:** Pulau Ubin; 6 October 2025; around 1435 hrs.

**Habitat:** Secondary forest.

**Observer:** Leroy Rocky Alphonso.

**Observation:** A road-killed carcass was examined opportunistically as part of an ongoing macaque population census on Pulau Ubin. The individual possessed an inguinal structure that resembled a pair of fully descended testicles – two spherical swellings contained within a scrotal-like fold of skin at the inguinal region (Fig. 1). However, no external penile structure was observed (Fig. 2). Further examination at both the anterior and posterior margins of the scrotal area to locate the penis yielded no results. No scarring was observed in the inguinal region to suggest prior loss or removal of the penis. Except for the lack of a penis and prominent canine teeth, the overall morphology of the individual (facial features, body size of about 40 cm, and upper body musculature) is suggestive of a male macaque.



Fig. 1. Ventral view of the macaque carcass showing two large swellings at the inguinal region that resemble testicles. Fig. 2. Ventral view of the carcass showing the absence of a penile structure (Photographs by: Leroy Rocky Alphonso).

**Remarks:** The featured observation is interesting because of the unusual structure of the individual's genitalia, chiefly in the absence of a penis. Despite the largely male characteristics present, there is hesitation in determining the sex of the macaque. A published study on conspecifics in Thailand has documented female individuals with inguinal scrotum-like swellings that closely resemble male scrota when approaching ovulation. Due to difficulties in reliably identifying the individual's sex by observation of the gonadal phenotypic features, chromosomal analyses were conducted, which confirmed that the individuals were females (Malaivijitnond et al., 2007). Because a genetic investigation on the featured macaque carcass was not carried out, its sex could not be established.

**Literature cited:**

Malaivijitnond S, Hamada Y, Varavudhi P & Takenaka O (2007) Female long-tailed macaques with scrotum-like structure. *American Journal of Physical Anthropology*, 132(4): 569–575.